



碧云天生物技术/Beyotime Biotechnology  
 订货热线: 400-1683301 或 800-8283301  
 订货 e-mail: order@beyotime.com  
 技术咨询: info@beyotime.com  
 网址: http://www.beyotime.com

## DAB辣根过氧化物酶显色试剂盒

产品编号	产品名称	包装
P0203	DAB辣根过氧化物酶显色试剂盒	共100ml

### 产品简介:

- DAB辣根过氧化物酶显色试剂盒(DAB Horseradish Peroxidase Color Development Kit)是一种借助辣根过氧化物酶(HRP),用于免疫组化显色、原位杂交显色或Western、Southern、Northern、EMSA等膜显色的试剂盒。
- DAB, 即3,3N-Diaminobenzidine Tetrahydrochloride, 是辣根过氧化物酶的常用底物。在辣根过氧化物酶的催化下, DAB会产生棕色沉淀。该棕色沉淀不溶于水和乙醇。因此在DAB显色后, 还可以使用溶于乙醇的染料进行后续染色。
- 本试剂盒可以用于细胞或组织在免疫组化或原位杂交时结合的辣根过氧化物酶显色, 也可以用于Western等结合有辣根过氧化物酶的膜的显色检测。同时也可以用于细胞或组织内源性的辣根过氧化物酶显色。
- 用于免疫组化或原位杂交时, 如果每个片子使用0.2毫升显色液, 那么本试剂盒共可以检测500个片子。

### 包装清单:

产品编号	产品名称	包装
P0203-1	DAB显色液A	50ml
P0203-2	DAB显色液B	50ml
—	说明书	1份

### 保存条件:

-20°C保存, 一年有效。DAB显色液A和DAB显色液B均需避光保存。

### 注意事项:

- DAB对人体有害, 操作时请小心, 并注意有效防护以避免直接接触人体或吸入体内。
- 本产品仅限于专业人员的科学研究用, 不得用于临床诊断或治疗, 不得用于食品或药品, 不得存放于普通住宅内。
- 为了您的安全和健康, 请穿实验服并戴一次性手套操作。

### 使用说明:

1. 对于组织切片或细胞样品或膜, 在与辣根过氧化物酶标记的抗体或其它形式的探针孵育后, 用适当洗涤液洗涤3-5次, 每次3-5分钟。对于检测内源性辣根过氧化物酶的组织或细胞样品, 在适当固定后, 也用适当洗涤液洗涤3-5次, 每次3-5分钟。

2. 按照如下比例依次加入各溶液, 混匀后即配制成DAB染色工作液:

DAB显色液A	0.5ml	5ml
DAB显色液B	0.5ml	5ml
DAB染色工作液	1ml	10ml

3. 最后一次洗涤完毕后, 去除洗涤液, 加入适量DAB染色工作液, 确保能充分覆盖样品。
4. 室温避光孵育3-30分钟或更长时间(可长达24小时), 直至显色至预期深浅。
5. 去除DAB染色工作液, 用蒸馏水洗涤1-2次即可终止显色反应。
6. 对于组织切片或细胞样品, 显色反应终止后, 如有必要可以用中性红染色液(neutral red staining solution)染色, 以便于观察。对于膜, 显色反应终止后, 可以室温晾干避光保存。

### 常见问题:

#### 1. 背景显色太深。

- a. 在免疫组化时如果背景显色太深, 一方面需考虑使用适当的封闭液进行封闭, 例如选购适当的封闭液或使用和一抗相同来源的血清(10%)进行封闭。另一方面, 请注意选购经过适当吸附的二抗, 以减小二抗的非特异性吸附。
- b. 在免疫组化时如果背景显色太深, 需注意灭活内源性过氧化氢酶。可以在4体积甲醇中加入1体积3%过氧化氢, 混匀后用于内源性过氧化氢酶的灭活。
- c. 可以考虑缩短显色时间, 或降低二抗浓度。另外, 选择适当强度的洗涤液, 或延长洗涤时间也会有所帮助。

#### 2. 没有显色或显色太弱。

- a. 可以考虑适当提高一抗或二抗的浓度。检测二抗效果, 滴一滴稀释二抗在膜上, 检测二抗是否可以被正常显色。
- b. 可以考虑使用更加灵敏的放大检测体系, 例如使用生物素检测体系。

c. 可以适当延长显色时间, 另外确定抗原修复是否对于使用的一抗是必需的。

## 使用本产品的文献:

1. Shi Y, Liu C, Zhai J Effect of Sini decoction on angiotensin II transforming growth factor  $\beta$ 1 and connective tissue growth factor in rats with myocardial fibrosis-induced banding of the abdominal aorta. *J Tradit Chin Med* 38(3):427-432. 2018 Jun
2. Xu XH, Zhang SJ, Hu QB, Song XY, Pan W Effects of microRNA-494 on proliferation, migration, invasion, and apoptosis of medulloblastoma cells by mediating c-myc through the p38 MAPK signaling pathway. *J Cell Biochem* 2018 Oct 10
3. Lei H, Tu Y, Yang L, Jin J, Luo H, Xu H, Kang J, Zhou L, Wu Y Quinacrine Depletes BCR-ABL and Suppresses Ph-Positive Leukemia Cells. *Cancer Invest* 37(6):242-252. 2019
4. Yu Q, Zhao B, He Q, Zhang Y, Peng XB microRNA-206 is required for osteoarthritis development through its effect on apoptosis and autophagy of articular chondrocytes via modulating the phosphoinositide 3-kinase/protein kinase B-mTOR pathway. *J Cell Biochem* 120(4):5287-5303. 2019 Apr
5. Liu M, Qu Y, Teng X, Xing Y, Li D, Li C, Cai L PADI4-mediated epithelial-mesenchymal transition in lung cancer cells. *Mol Med Rep* 19(4):3087-3094. 2019 Apr
6. Chen ZL, Qin L, Peng XB, Hu Y, Liu B INHBA gene silencing inhibits gastric cancer cell migration and invasion by impeding activation of the TGF- $\beta$  signaling pathway. *J Cell Physiol* 234(10):18065-18074. 2019 Aug
7. Zuo L, Li J, Ge S, Ge Y, Shen M, Wang Y, Zhou C, Wu R, Hu J Bryostatins ameliorated experimental colitis in IL-10<sup>-/-</sup> Mice by protecting the intestinal barrier and limiting immune dysfunction. *J Cell Mol Med* 23(8):5588-5599. 2019 Aug
8. Liu Z, Zhao X, Shan H, Gao H, Wang P microRNA-520c-3p suppresses NLRP3 inflammasome activation and inflammatory cascade in preeclampsia by downregulating NLRP3. *Inflamm Res* 68(8):643-654. 2019 Aug
9. Qian WH, Liu YY, Li X, Pan Y MicroRNA-141 ameliorates alcoholic hepatitis-induced intestinal injury and intestinal endotoxemia partially via a TLR4-dependent mechanism. *Int J Mol Med* 44(2):569-581. 2019 Aug
10. Xi J, Sun Y, Zhang M, Fa Z, Wan Y, Min Z, Xu H, Xu C, Tang J GLS1 promotes proliferation in hepatocellular carcinoma cells via AKT/GSK3 $\beta$ /CyclinD1 pathway. *Exp Cell Res* 381(1):1-9. 2019 Aug 1
11. Feng PC, Ke XF, Kuang HL, Pan LL, Ye Q, Wu JB BMP2 secretion from hepatocellular carcinoma cell HepG2 enhances angiogenesis and tumor growth in endothelial cells via activation of the MAPK/p38 signaling pathway. *Stem Cell Res Ther* 10(1):237. 2019 Aug 6
12. An J, Li G, Zhang J, Zhou H, Jiang J, Wang X, Feng X, Wang S GNAS knockdown suppresses osteogenic differentiation of mesenchymal stem cells via activation of Hippo signaling pathway. *J Cell Physiol* 234(12):22299-22310. 2019 Dec
13. Chen X, Wu Y, Diao Z, Han X, Li D, Ruan X, Liu W C1q/tumor necrosis factor-related protein-3 improves renal fibrosis via inhibiting notch signaling pathways. *J Cell Physiol* 234(12):22352-22364. 2019 Dec
14. Gong H, Ni J, Xu Z, Huang J, Zhang J, Huang Y, Zeng C, Zhang X, Cheng H, Ke Y Shp2 in myocytes is essential for cardiovascular and neointima development. *J Mol Cell Cardiol* 137:71-81. 2019 Dec
15. Han L, Zan Y, Huang C, Zhang S NELFE promoted pancreatic cancer metastasis and the epithelial-to-mesenchymal transition by decreasing the stabilization of NDRG2 mRNA. *Int J Oncol* 55(6):1313-1323. 2019 Dec
16. Huang S, Tang N, Zhao H, Tang CL Effect of electrical stimulation combined with diet therapy on insulin resistance via mTOR signaling. *Mol Med Rep* 20(6):5152-5162. 2019 Dec
17. Zheng YJ, Liang TS, Wang J, Zhao JY, Yang DK, Liu ZS Silencing lncRNA LOC101928963 Inhibits Proliferation and Promotes Apoptosis in Spinal Cord Glioma Cells by Binding to PMAIP1. *MOL THER-NUCL ACIDS* 18:485-495. 2019 Dec 6
18. Hu T, Lu MN, Chen B, Tong J, Mao R, Li SS, Dai P, Tan YX, Xiyang YB Electro-acupuncture-induced neuroprotection is associated with activation of the IGF-1/P13K/Akt pathway following adjacent dorsal root ganglionectomies in rats. *Int J Mol Med* 43(2):807-820. 2019 Feb
19. Wang G, Pan J, Zhang L, Wang C Overexpression of grainyhead-like transcription factor 2 is associated with poor prognosis in human pancreatic carcinoma. *Oncol Lett* 17(2):1491-1496. 2019 Feb
20. Xiang M, Lu M, Quan J, Xu M, Meng D, Cui A, Li N, Liu Y, Lu P, Kang X, Wang X, Sun N, Zhao M, Liang Q, Le L, Wang X, Zhang J, Chen S Direct in vivo application of induced pluripotent stem cells is feasible and can be safe. *Theranostics* 9(1):290-310. 2019 Jan 1
21. Ding Y, He J, Huang J, Yu T, Shi X, Zhang T, Yan G, Chen S, Peng C Harmine induces anticancer activity in breast cancer cells via targeting TAZ. *Int J Oncol* 54(6):1995-2004. 2019 Jun
22. Zhu Z, Yu J, Lin W, Tang H, Zhang W, Lu B Molecular hydrogen accelerates the reversal of acute obstructive cholangitis-induced liver dysfunction by restoring gap and tight junctions. *Mol Med Rep* 19(6):5177-5184. 2019 Jun
23. Ouyang X, Zhu Z, Yang C, Wang L, Ding G, Jiang F Epinephrine increases malignancy of breast cancer through p38 MAPK signaling pathway in depressive disorders. *INT J CLIN EXP PATHO* 12(6):1932-1946. eCollection 2019. 2019 Jun 1
24. Li YJ, Zhang K, Sun T, Wang J, Guo YY, Yang L, Yang Q, Li YJ, Liu SB, Zhao MG, Wu YM Epigenetic suppression of liver X receptor  $\beta$  in anterior cingulate cortex by HDAC5 drives CFA-induced chronic inflammatory pain. *J NEUROINFLAMM* 16(1):132. 2019 Jun 29
25. Zhao Z, Guan JZ, Wu M, Lai GH, Zhu ZL Downregulation of microRNA-23b protects against ischemia-reperfusion injury via p53 signaling pathway by upregulating MDM4 in rats. *J Cell Biochem* 120(3):4599-4612. 2019 Mar
26. Cui A, Xiang M, Xu M, Lu P, Wang S, Zou Y, Qiao K, Jin C, Li Y, Lu M, Chen AF, Chen S VCAM-1-mediated neutrophil infiltration exacerbates ambient fine particle-induced lung injury. *Toxicol Lett* 302:60-74. 2019 Mar 1
27. Zhang GM, Zhang TT, An SY, El-Samahy MA, Yang H, Wan YJ, Meng FX, Xiao SH, Wang F, Lei ZH Expression of Hippo signaling pathway components in Hu sheep male reproductive tract and spermatozoa. *Theriogenology* 126:239-248. 2019 Mar 1
28. Hui GD, Xiu WY, Yong C, Yuan CB, Jun Z, Jun GJ, Jun YJ, Xiang XX, Wei HS, Feng ML AMP-activated protein kinase  $\alpha$ 1 serves a carcinogenic role via regulation of vascular endothelial growth factor expression in patients with non-small cell lung cancer. *Oncol Lett* 17(5):4329-4334. 2019 May
29. Li Y, Cheng S, Li L, Zhao Y, Shen W, Sun X Light-exposure at night impairs mouse ovary development via cell apoptosis and DNA damage. *BIOSCIENCE REP* 39(5). pii: BSR20181464. 2019 May 2
30. Ye W, Zheng C, Yu D, Zhang F, Pan R, Ni X, Shi Z, Zhang Z, Xiang Y, Sun H, Shi K, Chen B, Zhang Q, Zhou M Lipoxin A4 Ameliorates Acute Pancreatitis-Associated Acute Lung Injury through the Antioxidative and Anti-Inflammatory Effects of the Nrf2 Pathway. *Oxid Med Cell Longev* 2019:2197017. 2019 Nov 6
31. Guo G, Sun L, Yang L, Xu H IDO1 depletion induces an anti-inflammatory response in macrophages in mice with chronic viral myocarditis. *Cell Cycle* 18(20):2598-2613. 2019 Oct
32. Li X, Wang Q, Deng G, Liu Y, Wei B, Liu X, Bao W, Wang Q, Wu S Porous Se@SiO<sub>2</sub> nanospheres attenuate cisplatin-induced acute kidney injury via activation of Sirt1. *TOXICOL APPL PHARM* 380:114704. 2019 Oct 1
33. Yan L, Liu G, Cao H, Zhang H, Shao F Hsa\_circ\_0035483 sponges hsa-miR-335 to promote the gemcitabine-resistance of human renal cancer cells by autophagy regulation. *BIOCHEM BIOPH RES CO* 519(1):172-178. 2019 Oct 29

34. Xiao D, Bi R, Liu X, Mei J, Jiang N, Zhu S Notch Signaling Regulates MMP-13 Expression via Runx2 in Chondrocytes. *SCI REP-UK* 9(1):15596. 2019 Oct 30
35. Zhu HQ, Zhang C, Guo ZY, Yang JM, Guo JH, Chen C, Yao QH, Liu F, Zhang QW, Gao FH Oridonin induces Mdm2-p60 to promote p53-mediated apoptosis and cell cycle arrest in neuroblastoma. *CANCER MED-US* 8(11):5313-5326. 2019 Sep
36. Liu Y, Wang J, Yang T, Liu R, Xu Y Overexpression levels of cripto-1 predict poor prognosis in patients with prostate cancer following radical prostatectomy. *Oncol Lett* 18(3):2584-2591. 2019 Sep
37. Wang Z, Yuan C, Huang Y, Liu Z, Yu X, Lv C, Su Z Decreased expression of apoptosis-inducing factor in renal cell carcinoma is associated with poor prognosis and reduced postoperative survival. *Oncol Lett* 18(3):2805-2812. 2019 Sep
38. Zhou G, Tang S, Yang L, Niu Q, Chen J, Xia T, Wang S, Wang M, Zhao Q, Liu L, Li P, Dong L, Yang K, Zhang S, Wang A Effects of long-term fluoride exposure on cognitive ability and the underlying mechanisms: Role of autophagy and its association with apoptosis. *TOXICOL APPL PHARM* 378:114608. 2019 Sep 1
39. Liu XQ, Duan LS, Chen YQ, Jin XJ, Zhu NN, Zhou X, Wei HW, Yin L, Guo JR lncRNA MALAT1 Accelerates Wound Healing of Diabetic Mice Transfused with Modified Autologous Blood via the HIF-1 $\alpha$  Signaling Pathway. *MOL THER-NUCL ACIDS* 17:504-515. 2019 Sep 6
40. Zhang Tao, Xiaoqing Zhou, Yan Zhang, Wenfeng Pu, Yi Yang, Fuxia Wei, Qian Zhou, Lin Zhang, Zhonghan Du, Ji Wu Xi Lei San Attenuates Dextran Sulfate Sodium-Induced Colitis in Rats and TNF- $\alpha$ -Stimulated Colitis in CACO2 Cells: Involvement of the NLRP3 Inflammasome and Autophagy Mediators *Inflamm* doi: 10.1155/2021/1610251. 2021 Apr 21;2021:1610251.
41. Ni-Ya Wang, Jin-Nan Li, Wei-Lin Liu, Qi Huang, Wen-Xing Li, Ya-Hong Tan, Fang Liu, Zi-Hua Song, Meng-Yue Wang, Ning Xie, Rong-Rong Mao, Ping Gan, Yu-Qiang Ding, Zhi Zhang, Bao-Ci Shan, Li-Dian Chen, Qi-Xin Zhou, Lin Xu Ferulic Acid Ameliorates Alzheimer's Disease-like Pathology and Repairs Cognitive Decline by Preventing Capillary Hypofunction in APP/PS1 Mice *Neurotherapeutics* doi: 10.1007/s13311-021-01024-7. 2021 Apr;18(2):1064-1080.
42. Lijun Kong, Hwei Zhang, Chaosheng Lu, Keqing Shi, Hongjian Huang, Yushu Zheng, Yongqiang Wang, Dan Wang, Hongwei Wang, Wei Huang AICAR, an AMP-Activated Protein Kinase Activator, Ameliorates Acute Pancreatitis-Associated Liver Injury Partially Through Nrf2-Mediated Antioxidant Effects and Inhibition of NLRP3 Inflammasome Activation *Front Pharmacol* doi: 10.3389/fphar.2021.724514. 2021 Aug 31;12:724514.
43. Lei Yu, Jie Liu, Tang-De Zhang, Xiu-Fen Zheng, Dong-Lan Luo, Wei-Liang Zhu, Xian-Wen Qiu, Lin-Lang Guo Decreased TMEM40 expression is associated with malignant behavior of cutaneous squamous cell carcinoma and inhibits tumor progression *Oncol Lett* doi: 10.3892/ol.2021.12867. 2021 Aug;22(2):606.
44. Shaoxiong Wang, Li Sun Silencing Aurora-kinase-A (AURKA) reinforced the sensitivity of diffuse large B-cell lymphoma cells to cyclophosphamide, doxorubicin, vincristine, and prednisone (CHOP) via suppressing  $\beta$ -Catenin and R *Bioengineered* doi: 10.1080/21655979.2021.1985346. 2021 Dec;12(1):8296-8308.
45. Wen Jiang, Jun Zhang, Xudong Zhang, Chenghong Fan, Jinlong Huang VAP-PLGA microspheres (VAP-PLGA) promote adipose-derived stem cells (ADSCs)-induced wound healing in chronic skin ulcers in mice via PI3K/Akt/HIF-1 $\alpha$  pathway *Bioengineered* doi: 10.1080/21655979.2021.1990193. 2021 Dec;12(2):10264-10284.
46. Dehong Mao, Zhongmei He, Wei Xuan, Jiao Deng, Weichun Li, Xiaoying Fang, Linglong Li, Feng Zhang Effect and mechanism of BDNF/TrkB signaling on vestibular compensation *Bioengineered* doi: 10.1080/21655979.2021.1997565. 2021 Dec;12(2):11823-11836.
47. Yi-Tong Zhu, Qun Zhang, Hong-Yu Xie, Ke-Wei Yu, Gao-Jing Xu, Si-Yue Li, Yi Wu Environmental enrichment combined with fasudil promotes motor function recovery and axonal regeneration after stroke *Neural Regen Res* doi: 10.4103/1673-5374.313048. 2021 Dec;16(12):2512-2520.
48. Huanhuan Zhu, Shaopeng Tong, Yan Cui, Xiaodong Wang, Mingying Wang Tanshinol alleviates ulcerative colitis by promoting the expression of VLDLR *Drug Dev Res* doi: 10.1002/ddr.21840. 2021 Dec;82(8):1258-1268.
49. Fangrui Lin, Chenshuang Zhang, Yanping Li, Junshuai Yan, Yunjian Xu, Ying Pan, Rui Hu, Liwei Liu, Junle Qu Human serum albumin gradient in serous ovarian cancer cryosections measured by fluorescence lifetime *Biomed Opt Express* doi: 10.1364/BOE.415456. 2021 Feb 2;12(3):1195-1204.
50. Miao Zhang, Yuan Hu, Jiahui Zhang, Junjian Zhang FTY720 Prevents Spatial Memory Impairment in a Rat Model of Chronic Cerebral Hypoperfusion via a SIRT3-Independent Pathway *Front Aging Neurosci* doi: 10.3389/fnagi.2020.593364. 2021 Jan 14;12:593364.
51. Yanting Yu, Keqi Xiang, Mingzhi Xu, Yuqiang Li, Jiajunzi Cui, Lanqiong Zhang, Xiaohu Tang, Xianqi Zhu, Lili Qian, Meng Zhang, Yan Yang, Qingsong Yu, Youqing Shen, Zhihua Gan Prodrug Nanomedicine Inhibits Chemotherapy-Induced Proliferative Burst by Altering the Deleterious Intercellular Communication *ACS Nano* doi: 10.1021/acsnano.0c07113. 2021 Jan 26;15(1):781-796.
52. Yingjie Lu, Dongliang Bian, Xuelin Zhang, Huibiao Zhang, Zhenghong Zhu Inhibition of Bcl-2 and Bcl-xL overcomes the resistance to the third-generation EGFR tyrosine kinase inhibitor osimertinib in non-small cell lung cancer *Mol Med Rep* doi: 10.3892/mmr.2020.11686. 2021 Jan;23(1):48.
53. Jian-Ping Zhang, Wei-Jing Zhang, Miao Yang, Hua Fang Propofol attenuates lung ischemia/reperfusion injury through the involvement of the MALAT1/microRNA-144/GSK3 $\beta$  axis *Mol Med* doi: 10.1186/s10020-021-00332-0. 2021 Jul 15;27(1):77.
54. Zhao Huang, Lang Gong, Zezhong Zheng, Qi Gao, Xiongnan Chen, Yang Chen, Xiaojun Chen, Runda Xu, Jiachen Zheng, Zhiying Xu, Shengxun Zhang, Heng Wang, Guihong Zhang GS-441524 inhibits African swine fever virus infection in vitro *Antiviral Res* doi: 10.1016/j.antiviral.2021.105081. 2021 Jul;191:105081.
55. Na Luo, Shiqin Liu, Xin Li, Yu Hu, Kejing Zhang Circular RNA circHIPK3 promotes breast cancer progression via sponging MiR-326 *Cell Cycle* doi: 10.1080/15384101.2021.1939476. 2021 Jul;20(13):1320-1333.
56. Fan Zhang, Baoguo Zhang, Rong Tang, Haiping Jiang, Zhimin Ji, Yongjian Chen, Hao Feng The occurrence of lupus nephritis is regulated by USP7-mediated JMJD3 stabilization *Immunol Lett* doi: 10.1016/j.imlet.2021.04.006. 2021 Jul;235:41-50.
57. Tao Jiang, Shoucai Xu, Yangyang Shen, Yong Xu, Yuwen Li Genistein Attenuates Isoflurane-Induced Neuroinflammation by Inhibiting TLR4-Mediated Microglial Polarization in vivo and in vitro *J Inflamm Res* doi: 10.2147/JIR.S304336. 2021 Jun 17;14:2587-2600.
58. Mingxin Wen, Hui Ren, Shouqiang Zhang, Tao Li, Jiefeng Zhang, Peng Ren CT45A1 promotes the metastasis of osteosarcoma cells in vitro and in vivo through  $\beta$ -catenin *Cell Death Dis* doi: 10.1038/s41419-021-03935-x. 2021 Jun 25;12(7):650.
59. Zhi-Hang Li, Ning An, Xi-Jie Huang, Chen Yang, Hong-Luan Wu, Xiao-Cui Chen, Qing-Jun Pan, Hua-Feng Liu Cyclosporine A blocks autophagic flux in tubular epithelial cells by impairing TFEB-mediated lysosomal function *J Cell Mol Med* doi: 10.1111/jcmm.16593. 2021 Jun;25(12):5729-5743.
60. Bin Feng, Lei Meng, Liming Luan, Zhihao Fang, Peng Zhao, Guangyu Zhao Upregulation of Extracellular Vesicles-Encapsulated miR-132 Released From Mesenchymal Stem Cells Attenuates Ischemic Neuronal Injury by Inhibiting Smad2/c-jun Pathway via Acvr2b Suppression *Front Cell Dev Biol* doi: 10.3389/fcell.2020.568304. 2021 Mar 8;8:568304.
61. Chenhao Tong, Jiandong Li, Weiguo Lin, Wenda Cen, Weiguang Zhang, Zhiyong Zhu, Baochun Lu, Jianhua Yu Inhibition of heat shock protein 90 alleviates cholestatic liver injury by decreasing IL-1 $\beta$  and IL-18 expression *Exp Ther Med* doi: 10.3892/etm.2021.9672. 2021 Mar;21(3):241.
62. Hong Xue, Baosong Xie, Nengluan Xu, Hongru Li, Qianshun Chen, Weiping Xie, Hong Wang Etanercept Protected Against Cigarette Smoke Extract-Induced Inflammation and Apoptosis of Human Pulmonary Artery Endothelial Cells via

- Regulating TNFR1 Int J Chron Obstruct Pulmon Dis doi: 10.2147/COPD.S295580. 2021 May 11;16:1329-1345.
63. Tao Li, Yangdong Han, Baofu Guo, Peng Chen, Yingchun Wan, Baoguo Ye Sevoflurane protects against ischemia-reperfusion injury in mice after total knee arthroplasty via facilitating RASD1-mediated protein kinase A pathway activation Aging (Albany NY) doi: 10.18632/aging.103899. 2021 May 12;13(9):13333-13348.
64. Li-Feng Sun, Ya-Li Yang, Mei-Yue Wang, Hua-Shan Zhao, Tian-Xia Xiao, Meng-Xia Li, Bao-Bei Wang, Chen Huang, Pei-Gen Ren, Jian V Zhang Inhibition of Col6a5 Improve Lipid Metabolism Disorder in Dihydrotestosterone-Induced Hyperandrogenic Mice Front Cell Dev Biol doi: 10.3389/fcell.2021.669189. 2021 May 24;9:669189.
65. Mao Ouyang, Tao Qin, Hengdao Liu, Junya Lu, Caixia Peng, Qin Guo Enhanced Inflammatory Reaction and Thrombosis in High-Fat Diet-Fed ApoE<sup>-/-</sup> Mice are Attenuated by Celastrol Exp Clin Endocrinol Diabetes doi: 10.1055/a-1010-5543. 2021 May;129(5):339-348.
66. Lei Yu, Yuxi Chen, Shaohui Yuan, Yang Cao, Zhenggang Bi Peiminine Induces G0/G1-Phase Arrest, Apoptosis, and Autophagy via the ROS/JNK Signaling Pathway in Human Osteosarcoma Cells in Vitro and in Vivo Front Pharmacol doi: 10.3389/fphar.2021.770846. 2021 Nov 12;12:770846.
67. Qing Su, Xiao-Jing Yu, Xiao-Min Wang, Hong-Bao Li, Ying Li, Juan Bai, Jie Qi, Nianping Zhang, Kai-Li Liu, Yan Zhang, Guo-Qing Zhu, Yu-Ming Kang Bilateral Paraventricular Nucleus Upregulation of Extracellular Superoxide Dismutase Decreases Blood Pressure by Regulation of the NLRP3 and Neurotransmitters in Salt-Induced Hypertensive Rats Front Pharmacol doi: 10.3389/fphar.2021.756671. 2021 Nov 25;12:756671.
68. Meiling Du, Jie Feng, Yiran Tao, Qincong Pan, Fengyuan Chen GNAO1 as a Novel Predictive Biomarker for Late Relapse in Hepatocellular Carcinoma J Healthc Eng doi: 10.1155/2021/7631815. 2021 Nov 30;2021:7631815.
69. Lingming Kong, Jie Deng, Xiang Zhou, Binbin Cai, Baofu Zhang, Xiaohu Chen, Zongjing Chen, Weiming Wang Sitagliptin activates the p62-Keap1-Nrf2 signalling pathway to alleviate oxidative stress and excessive autophagy in severe acute pancreatitis-related acute lung injury Cell Death Dis doi: 10.1038/s41419-021-04227-0. 2021 Oct 11;12(10):928.
70. Sijie Xie, Xiaoxue Jiang, Rushi Qin, Shuting Song, Yanan Lu, Liyan Wang, Yingjie Chen, Dongdong Lu miR-1307 promotes hepatocarcinogenesis by CALR-OSTC-endoplasmic reticulum protein folding pathway iScience doi: 10.1016/j.isci.2021.103271. 2021 Oct 14;24(11):103271.
71. Peng Su, Diya Wang, Zipeng Cao, Jingyuan Chen, Jianbin Zhang The role of NLRP3 in lead-induced neuroinflammation and possible underlying mechanism Environ Pollut doi: 10.1016/j.envpol.2021.117520. 2021 Oct 15;287:117520.
72. Quan Wang, Yilin Shen, Yi Pan, Kaili Chen, Rui Ding, Tianyuan Zou, Andi Zhang, Dongye Guo, Peilin Ji, Cui Fan, Ling Mei, Haixia Hu, Bin Ye, Mingliang Xiang Tlr2/4 Double Knockout Attenuates the Degeneration of Primary Auditory Neurons: Potential Mechanisms From Transcriptomic Perspectives Front Cell Dev Biol doi: 10.3389/fcell.2021.750271. 2021 Oct 25;9:750271.
73. Lingling Wang, Dongge Xu, Qun Huang, Guang Yang, Mengyu Zhang, Jingai Bi, Jinjun Shan, Erguang Li, Susu He Characterization of Tonsil Microbiota and Their Effect on Adenovirus Reactivation in Tonsillectomy Samples Microbiol Spectr doi: 10.1128/Spectrum.01246-21. 2021 Oct 31;9(2):e0124621.
74. Rui Wang, Jingjing Xu, Jinbo Wu, Shunheng Gao, Zhiping Wang Angiotensin-converting enzyme 2 alleviates pulmonary artery hypertension through inhibition of focal adhesion kinase expression Exp Ther Med doi: 10.3892/etm.2021.10599. 2021 Oct;22(4):1165.
75. Lu Li, Rongsheng Zhou, Haigang Lv, Lei Song, Xiaohong Xue, Li Wu Inhibitive Effect of Luteolin on Sevoflurane-Induced Neurotoxicity through Activation of the Autophagy Pathway by HMOX1 ACS Chem Neurosci doi: 10.1021/acchemneuro.1c00157. 2021 Sep 15;12(18):3314-3322.
76. Wang Sheng, Weixi Guo, Fang Lu, Hongming Liu, Rongmu Xia, Feng Dong Upregulation of Linc00284 Promotes Lung Cancer Progression by Regulating the miR-205-3p/c-Met Axis Front Genet doi: 10.3389/fgene.2021.694571. 2021 Sep 20;12:694571.
77. Jun-Hua Nie, Tao Yang, Hong Li, Hai-Shan Ye, Guo-Qing Zhong, Ting-Ting Li, Chi Zhang, Wen-Han Huang, Jin Xiao, Zhi Li, Jian-Li He, Bo-Le Du, Yu Zhang, Jia Liu Identification of GPC3 mutation and upregulation in a multidrug resistant osteosarcoma and its spheroids as therapeutic target J Bone Oncol doi: 10.1016/j.jbo.2021.100391. 2021 Sep 20;30:100391.
78. Yanshe Xie, Guangbin Liu, Xupeng Zang, Qun Hu, Chen Zhou, Yaokun Li, Dewu Liu, Linjun Hong Differential Expression Pattern of Goat Uterine Fluids Extracellular Vesicles miRNAs during Peri-Implantation Cells doi: 10.3390/cells10092308. 2021 Sep 3;10(9):2308.
79. Tao Liu, Rongmu Xia, Chenmeng Li, Xiaocong Chen, Xuemin Cai, Wengang Li mRNA expression level of CDH2, LEP, POSTN, TIMP1 and VEGFC modulates 5-fluorouracil resistance in colon cancer cells Exp Ther Med doi: 10.3892/etm.2021.10455. 2021 Sep;22(3):1023.
80. Xiaowei Xing, Shuang Guo, Yusheng Liu, Jiangying Kuang, Zhiwei Huang, Xin Wang, Qinghua Lu Saxagliptin protects against diabetic nephropathy by inhibiting caspase 3/PARP-1-dependent nephrocyte apoptosis Exp Ther Med doi: 10.3892/etm.2021.10422. 2021 Sep;22(3):990.
81. Xiuyan Wang, Bin Song, Mingcui Zang, He Ji, He Yang, Shuang Jiang, Xiao Yang LOC100996425 acts as a promoter in prostate cancer by mediating hepatocyte nuclear factor 4A and the AMPK/mTOR pathway J Cell Mol Med doi: 10.1111/jcmm.16657. 2021 Sep;25(17):8174-8186.
82. Xiaohua Zhang, Tianying Zhang, Xiaojuan Han, Zhongying Qiu, Jianghong Cheng, Xingchun Gao, Xingchun Gou CDK-associated Cullin 1 Promotes Cell Proliferation and Inhibits Cell Apoptosis in Human Glioblastoma Curr Cancer Drug Targets doi: 10.2174/1568009621666210602164225. 2021;21(10):870-880.
83. Xiaosong Wang, Xiaojun Yu, Haoran Xu, Kang Wei, Shanxi Wang, Yingguang Wang, Junfei Han Serum-derived extracellular vesicles facilitate temozolomide resistance in glioblastoma through a HOTAIR-dependent mechanism Cell Death Dis doi: 10.1038/s41419-022-04699-8. 2022 Apr 13;13(4):344.
84. Zhenkang Wen, Sipeng Lin, Changchuan Li, Zhuji Ouyang, Zhong Chen, Shixun Li, Yuxi Huang, Wenqiang Luo, Zhongcan Zheng, Peidong Guo, Manyuan Kuang, Yue Ding MiR-92a/KLF4/p110 $\delta$  regulates titanium particles-induced macrophages inflammation and osteolysis Cell Death Discov doi: 10.1038/s41420-022-00999-2. 2022 Apr 13;8(1):197.
85. Yelin Song, Jie Yu, LingLing Li, Lei Wang, Liangle Dong, Guangmin Xi, Yun Jing Lu, Zuwei Li Luteolin impacts deoxyribonucleic acid repair by modulating the mitogen-activated protein kinase pathway in colorectal cancer Bioengineered doi: 10.1080/21655979.2022.2066926. 2022 Apr;13(4):10998-11011.
86. Wen-Xi Wang, Zhen-Ru Zhao, Ying Bai, Ya-Xing Li, Xiao-Ning Gao, Sen Zhang, Yan-Bin Sun Sevoflurane preconditioning prevents acute renal injury caused by ischemia-reperfusion in mice via activation of the Nrf2 signaling pathway Exp Ther Med doi: 10.3892/etm.2022.11232. 2022 Apr;23(4):303.
87. Jierong Chen, Lixue Cao, Jianhong Ma, Caifeng Yue, Dandan Zhu, Ran An, Xiaoxiao Wang, Yunmiao Guo, Bing Gu HDAC8 Promotes Liver Metastasis of Colorectal Cancer via Inhibition of IRF1 and Upregulation of SUCNR1 Oxid Med Cell Longev doi: 10.1155/2022/2815187. 2022 Aug 16;2022:2815187.
88. Bi Wang, Xinhui Jiang, Yuhong Li, Haixia Xu, Bei Ying, Jie Qiu, Zhi Huang, Xiaoshan Shao YY1 alleviates lupus nephritis-induced renal injury by reducing the Th17/Treg cell ratio via the IFN- $\gamma$ /Fra2 axis Lab Invest doi: 10.1038/s41374-022-00777-9. 2022 Aug;102(8):872-884.
89. Fangfang Zhao, Fangfang Ge, Minghua Xie, Zhenyu Li, Chunbao Zang, Lingsuo Kong, Youguang Pu, Xucai Zheng, Yiao Tan FTO mediated ERBB2 demethylation promotes tumor progression in esophageal squamous cell carcinoma cells Clin Exp Metastasis doi: 10.1007/s10585-022-10169-4. 2022 Aug;39(4):623-639.
90. Fufeng Gao, Jinlong Chen, Tingting Zhang, Naifu Liu LPCAT1 functions as an oncogene in cervical cancer through mediating JAK2/STAT3 signaling Exp

- Cell Res doi: 10.1016/j.yexcr.2022.113360. 2022 Dec 1;421(1):113360.
91. Jingqian Guan, Xizi Jiang, Yaoping Guo, Wenhui Zhao, Ji Li, Yizhuo Li, Ming Cheng, Lin Fu, Yue Zhao, Qingchang Li Autophagy inhibition and reactive oxygen species elimination by acetyl-CoA acetyltransferase 1 through fused in sarcoma protein to promote prostate cancer BMC Cancer doi: 10.1186/s12885-022-10426-5. 2022 Dec 14;22(1):1313.
  92. Yin hao Wang, Yulin Tseng, Keyu Chen, Xinglin Wang, Zebin Mao, Xuemin Li Reduction in Lens Epithelial Cell Senescence Burden through Dasatinib Plus Quercetin or Rapamycin Alleviates D-Galactose-Induced Cataract Progression J Funct Biomater doi: 10.3390/jfb14010006. 2022 Dec 21;14(1):6.
  93. Qun Lin, Yaxin Zhang, Weishi Hong, Haixiang Miao, Jihang Dai, Yu Sun Galangin ameliorates osteoarthritis progression by attenuating extracellular matrix degradation in chondrocytes via the activation of PRELP expression Eur J Pharmacol doi: 10.1016/j.ejphar.2022.175347. 2022 Dec 5;936:175347.
  94. Aihua Lu, Min Pu, Shiqi Mo, Jiahui Su, Jiajia Hu, Chunling Li, Weidong Wang, Tianxin Yang (Pro)renin Receptor Regulates Phosphate Homeostasis in Rats via Releasing Fibroblast Growth Factor-23 Front Physiol doi: 10.3389/fphys.2022.784521. 2022 Feb 11;13:784521.
  95. Jinlai Wei, Xiangru Zheng, Wenjun Li, Xiaoli Li, Zhongxue Fu Sestrin2 reduces cancer stemness via Wnt/ $\beta$ -catenin signaling in colorectal cancer Cancer Cell Int doi: 10.1186/s12935-022-02498-x. 2022 Feb 11;22(1):75.
  96. Zhicong Zhao, Zhenjun Zhao, Jianye Wang, He Zhang, Zhifeng Xi, Qiang Xia ABC6 Knockdown Fuels Cell Proliferation by Regulating PPAR $\alpha$  in Hepatocellular Carcinoma Front Oncol doi: 10.3389/fonc.2022.840287. 2022 Feb 24;12:840287.
  97. Shiyu Zhang, Zhihai Liang, Xuelian Xiang, Li Liu, Huiying Yang, Guodu Tang Identification and Validation of Hub Genes in Acute Pancreatitis and Hypertriglyceridemia Diabetes Metab Syndr Obes doi: 10.2147/DMSO.S349528. 2022 Feb 24;15:559-577.
  98. Shifu Li, Wengui Tao, Zheng Huang, Langchao Yan, Bo Chen, Chudai Zeng, Fenghua Chen The Transcriptional Landscapes and Key Genes in Brain Arteriovenous Malformation Progression in a Venous Hypertension Rat Model Revealed by RNA Sequencing J Inflamm Res doi: 10.2147/JIR.S347754. 2022 Feb 26;15:1381-1397.
  99. Shiyu Zhang, Huiying Yang, Xuelian Xiang, Li Liu, Huali Huang, Guodu Tang THBS2 is Closely Related to the Poor Prognosis and Immune Cell Infiltration of Gastric Cancer Front Genet doi: 10.3389/fgene.2022.803460. 2022 Feb 3;13:803460.
  100. Ronghua Xu, Huiming Deng, Lianfang Gan, Lifan Zhong, Yanxi Deng, Qianru Wang, Chuanzhu Lv, Ling Huang Chinese herbal component, Praeruptorin E, enhances anti-asthma efficacy and prevents toxicity of aminophylline by targeting the NF- $\kappa$ B/PXR/CYP3A4 pathway Ann Transl Med doi: 10.21037/atm-22-386. 2022 Feb;10(4):225.
  101. Xiangfei Xue, Lifang Ma, Xiao Zhang, Xin Xu, Susu Guo, Yikun Wang, Shiyu Qiu, Jiangtao Cui, Wanxin Guo, Yongchun Yu, Fenyong Sun, Yi Shi, Jiayi Wang Tumour cells are sensitised to ferroptosis via RB1CC1-mediated transcriptional reprogramming Clin Transl Med doi: 10.1002/ctm2.747. 2022 Feb;12(2):e747.
  102. Shuo Yang, Wenbo Liao Hydroxysafflor yellow A attenuates oxidative stress injury-induced apoptosis in the nucleus pulposus cell line and regulates extracellular matrix balance via CA XII Exp Ther Med doi: 10.3892/etm.2021.11105. 2022 Feb;23(2):182.
  103. Yingjie Liu, Weikang Guo, Yan Guo, Xinpan Chen, Wenhui Liu Bone marrow mesenchymal stem cell-derived exosomes improve renal fibrosis via regulating Smurf 2/Smad 7 Front Biosci (Landmark Ed) doi: 10.31083/j.fbl2701017. 2022 Jan 12;27(1):17.
  104. Haoyu Wu, Zhi Peng, Ying Xu, Zixuan Sheng, Yanshan Liu, Youguo Liao, Yin Wang, Ya Wen, Junzhi Yi, Chang Xie, Xuri Chen, Jiajie Hu, Bingqian Yan, Huijing Wang, Xudong Yao, Wei Fu, Hongwei Ouyang Engineered adipose-derived stem cells with IGF-1-modified mRNA ameliorates osteoarthritis development Stem Cell Res Ther doi: 10.1186/s13287-021-02695-x. 2022 Jan 15;13(1):19.
  105. Shiyu Zhang, Huiying Yang, Xuelian Xiang, Li Liu, Huali Huang, Guodu Tang BGN May be a Potential Prognostic Biomarker and Associated With Immune Cell Enrichment of Gastric Cancer Front Genet doi: 10.3389/fgene.2022.765569. 2022 Jan 26;13:765569.
  106. Qing Su, Xiao-Jing Yu, Xiao-Min Wang, Bo Peng, Juan Bai, Hong-Bao Li, Ying Li, Wen-Jie Xia, Li-Yan Fu, Kai-Li Liu, Jin-Jun Liu, Yu-Ming Kang Na<sup>+</sup>/K<sup>+</sup>-ATPase Alpha 2 Isoform Elicits Rac1-Dependent Oxidative Stress and TLR4-Induced Inflammation in the Hypothalamic Paraventricular Nucleus in High Salt-Induced Hypertension Antioxidants (Basel) doi: 10.3390/antiox11020288. 2022 Jan 31;11(2):288.
  107. Zhenyuan Han, Huiping Ren, Jingjing Sun, Lihui Jin, Qin Wang, Chuanbin Guo, Zhen Tian Integrated weighted gene coexpression network analysis identifies Frizzled 2 (FZD2) as a key gene in invasive malignant pleomorphic adenoma J Transl Med doi: 10.1186/s12967-021-03204-7. 2022 Jan 5;20(1):15.
  108. Guoliang Dai, Dong Wang, Shitang Ma, Shengwei Hong, Kang Ding, Xiyang Tan, Wenzheng Ju ACSL4 promotes colorectal cancer and is a potential therapeutic target of emodin Phytomedicine doi: 10.1016/j.phymed.2022.154149. 2022 Jul 20;102:154149.
  109. Ruohong Chen, Yingyi Lian, Shuai Wen, Qihua Li, Lingli Sun, Xingfei Lai, Zhenbiao Zhang, Junquan Zhu, Linsong Tang, Ji Xuan, Erdong Yuan, Shili Sun Shibi Tea (*Adinandra nitida*) and Camellianin A Alleviate CCl4-Induced Liver Injury in C57BL-6J Mice by Attenuation of Oxidative Stress, Inflammation, and Apoptosis Nutrients doi: 10.3390/nu14153037. 2022 Jul 24;14(15):3037.
  110. Sheng Jin, Shiming Tian, Hanlin Ding, Zhengwen Yu, Mingqiang Li SNHG5 knockdown alleviates neuropathic pain induced by chronic constriction injury via sponging miR-142-5p and regulating the expression of CAMK2A Mol Med Rep doi: 10.3892/mmr.2022.12737. 2022 Jul;26(1):221.
  111. Peng Liu, Yan Zhou, Xin Dong, Biao Zheng, Bo Liang, Rui Liang, Zhong Liu, Li Li, Peng Gong ZNF165 Is Involved in the Regulation of Immune Microenvironment and Promoting the Proliferation and Migration of Hepatocellular Carcinoma by AhR/CYP1A1 J Immunol Res doi: 10.1155/2022/4446805. 2022 Jun 1:2022:4446805.
  112. Na Li, Hang Du, Lejiao Mao, Ge Xu, Mengling Zhang, Yinzhen Fan, Xiaomei Dong, Lijun Zheng, Bin Wang, Xia Qin, Xuejun Jiang, Chengzhi Chen, Zhen Zou, Jun Zhang Reciprocal regulation of NRF2 by autophagy and ubiquitin-proteasome modulates vascular endothelial injury induced by copper oxide nanoparticles J Nanobiotechnology doi: 10.1186/s12951-022-01486-7. 2022 Jun 11;20(1):270.
  113. Panai Song, Yinyin Chen, Zhiwen Liu, Hong Liu, Li Xiao, Lin Sun, Jiali Wei, Liyu He LncRNA MALAT1 Aggravates Renal Tubular Injury via Activating LIN28A and the Nox4/AMPK/mTOR Signaling Axis in Diabetic Nephropathy Front Endocrinol (Lausanne) doi: 10.3389/fendo.2022.895360. 2022 Jun 23;13:895360.
  114. Qiang Zhang, Le Cao, Shanqi Zou, Yuanling Feng, Xudong Miao, Lu Huang, Yongping Wu Human Umbilical Cord Mesenchymal Stem Cell-Derived Extracellular Vesicles Carrying MicroRNA-181c-5p Promote BMP2-Induced Repair of Cartilage Injury through Inhibition of SMAD7 Expression Stem Cells Int doi: 10.1155/2022/1157498. 2022 Jun 24:2022:1157498.
  115. Yong Ji, Xiaofeng Xu, Cong Long, Jianjiang Wang, Li Ding, Zhizhong Zheng, Huiping Wu, Liu Yang, Lan Tao, Feng Gao SMYD2 aggravates gastrointestinal stromal tumor via upregulation of EZH2 and downregulation of TET1 Cell Death Discov doi: 10.1038/s41420-022-01038-w. 2022 Jun 6;8(1):274.
  116. Wei Chen, Mingjuan Hu, Tao Wei, Ying Liu, Tian Tan, Chengfang Zhang, Jiakuan Weng IL-1 receptor-associated kinase 1 participates in the modulation of the NLRP3 inflammasome by tumor-associated macrophages in hepatocellular carcinoma J Gastrointest Oncol doi: 10.21037/jgo-22-471. 2022 Jun;13(3):1317-1329.
  117. Yanhong Bu, Hong Wu, Ran Deng, Yan Wang The anti-angiogenesis mechanism

- of Geniposide on rheumatoid arthritis is related to the regulation of PTEN Inflammopharmacology doi: 10.1007/s10787-022-00975-3. 2022 Jun;30(3):1047-1062.
118. Panke Cheng, Hukui Han, Fuli Chen, Lianying Cheng, Cui Ma, Hui Huang, Chi Chen, Hua Li, Hao Cai, Hao Huang, Gang Li, Jianhong Tao Amelioration of acute myocardial infarction injury through targeted ferritin nanocages loaded with an ALKBH5 inhibitor Acta Biomater doi: 10.1016/j.actbio.2021.11.041. 2022 Mar 1:140:481-491.
119. Pengcheng Zhao, Wei Xia, Jianglian Wei, Yiwei Feng, Mao Xie, Zhijie Niu, Heng Liu, Shenghui Ke, Huayu Liu, Anzhou Tang, Guangyao He An Investigation of the Mechanisms of Radiation-Induced Muscle Injury in a Tree Shrew (Tupaia belangeri) Model Dose Response doi: 10.1177/15593258221082878. 2022 Mar 26;20(1):15593258221082878.
120. Chen Chen, Hongsheng Liang, Ruirui Qin, Xin Li, Liwei Wang, Songlin Du, Zhihao Chen, Xiangxi Meng, Zhonghua Lv, Qing Wang, Jing Meng, Aili Gao Doramectin inhibits glioblastoma cell survival via regulation of autophagy in vitro and in vivo Int J Oncol doi: 10.3892/ijo.2022.5319. 2022 Mar;60(3):29.
121. Bing Wang, Shengrong Yang, Yang Jia, Jianru Yang, Kun Du, Yujie Luo, Yunhe Li, Zhenghong Wang, Yi Liu, Bing Zhu PCAT19 Regulates the Proliferation and Apoptosis of Lung Cancer Cells by Inhibiting miR-25-3p via Targeting the MAP2K4 Signal Axis Dis Markers doi: 10.1155/2022/2442094. 2022 May 16:2022:2442094.
122. Pengfei Li, Xiangshun Ren, Yuanyuan Zheng, Jinming Sun, Gang Ye Tumor promoting effect of circ\_002172 associates with induced immune escape in breast cancer via the miR-296-5p/CXCL12 axis Int Immunopharmacol doi: 10.1016/j.intimp.2022.108530. 2022 May:106:108530.
123. Liangliang Wu, Yi Ge, Yudong Yuan, Hui Li, Huizhi Sun, Chao Xu, Yifei Wang, Tiansuo Zhao, Xiuchao Wang, Jing Liu, Song Gao, Antao Chang, Jihui Hao, Chongbiao Huang Genome-wide CRISPR screen identifies MTA3 as an inducer of gemcitabine resistance in pancreatic ductal adenocarcinoma Cancer Lett doi: 10.1016/j.canlet.2022.215864. 2022 Nov 1:548:215864.
124. Yipu Fan, Yihan Zhang, Kunyu Shi, Shan Cheng, Duanqing Pei, Xiaodong Shu Identification of a group of bisbenzylisoquinoline (BBIQ) compounds as ferroptosis inhibitors Cell Death Dis doi: 10.1038/s41419-022-05447-8. 2022 Nov 26;13(11):1000.
125. Haitao Nie, Yuqian Zhang, Shulong Duan, Ying Zhang, Yunlu Xu, Jixiang Zhan, Yue Wen, Xiaobing Wu RNA-Sequencing Analysis of Gene-Expression Profiles in the Dorsal Gland of Alligator sinensis at Different Time Points of Embryonic and Neonatal Development Life (Basel) doi: 10.3390/life12111787. 2022 Nov 4;12(11):1787.
126. Zhen Wu, Yongkun Wang, Zhengya Yu, Zhen Meng, Wenchao Duan, Wei Zhang, Jugao Fang TRIM21-a potential biomarker for the prognosis of thyroid cancer Exp Ther Med doi: 10.3892/etm.2022.11697. 2022 Nov 9;24(6):761.
127. Yicong Shang, Yueheng Li, Zhengyan Yang, Zhi Zhou Upregulation of TACAN in the trigeminal ganglion affects pain transduction in acute pulpitis Arch Oral Biol doi: 10.1016/j.archoralbio.2022.105530. 2022 Nov:143:105530.
128. Yueshan Wu, Jing Chang, Juanjuan Ge, Kangyan Xu, Quan Zhou, Xiaowen Zhang, Ni Zhu, Meichun Hu Isobavachalcone's Alleviation of Pyroptosis Contributes to Enhanced Apoptosis in Glioblastoma: Possible Involvement of NLRP3 Mol Neurobiol doi: 10.1007/s12035-022-03010-2. 2022 Nov;59(11):6934-6955.
129. Kai Chen, Junqing Zhang, Youyuan Huang, Xiaodong Tian, Yinmo Yang, Aimei Dong Single-cell RNA-seq transcriptomic landscape of human and mouse islets and pathological alterations of diabetes iScience doi: 10.1016/j.isci.2022.105366. 2022 Oct 14;25(11):105366.
130. Jiacheng Lin, Qihua Ling, Liang Yan, Bowu Chen, Fang Wang, Yihan Qian, Yueqiu Gao, Qian Wang, Hailong Wu, Xuehua Sun, Yanjun Shi, Xiaoni Kong Ancient Herbal Formula Mahuang Lianqiao Chixiaodou Decoction Protects Acute and Acute-on-Chronic Liver Failure via Inhibiting von Willebrand Factor Signaling Cells doi: 10.3390/cells11213368. 2022 Oct 25;11(21):3368.
131. Yuqin Zhu, Haoran Li, Mengchen Ma, Dandan Li, Ouyang Zhang, Suili Cai, Yajiao Wang, Dandan Chen, Shengnan Jin, Chunming Ding, Liang Xu Swertiamarin ameliorates diet-induced obesity by promoting adipose tissue browning and oxidative metabolism in preexisting obese mice Acta Biochim Biophys Sin (Shanghai) doi: 10.3724/abbs.2022154. 2022 Oct 25;55(1):131-142.
132. Chi Li, Yang-Jie Ru, Quan-Yue Lin, Guang-Chun Gao, Yu-Die Yang, Xiao-Qin Zhang, Jin-Lai Gao, Shi-Hui Liu, Chu-Wei Zheng, Lin Wang, Ya-Xin Zheng, Ji-Ming Wu Schisantherin D from Schisandra chinensis (Turcz.) Baill. exhibits anti-liver fibrosis capacity via modulating ETBR involved signaling, an in vitro and in vivo study Fitoterapia doi: 10.1016/j.fitote.2022.105290. 2022 Oct:162:105290.
133. Renhui Luo, Lili Xie, Yingmei Lin, Jun Shao, Zhejing Lin Oxymatrine suppresses oral squamous cell carcinoma progression by suppressing CXC chemokine receptor 4 in an m6A modification decrease dependent manner Oncol Rep doi: 10.3892/or.2022.8392. 2022 Oct;48(4):177.
134. Liping You, Jiacheng Lin, Zhuo Yu, Yihan Qian, Yuting Bi, Fang Wang, Lei Zhang, Chao Zheng, Jinghao Zhang, Wenxuan Li, Yaxuan Cai, Yueqiu Gao, Xiaoni Kong, Xuehua Sun Nobiletin suppresses cholangiocarcinoma proliferation via inhibiting GSK3β Int J Biol Sci doi: 10.7150/ijbs.78345. 2022 Sep 11;18(15):5698-5712.
135. Qiu Tu, Xiuyun Liu, Xiaoqing Yao, Ruixue Li, Gaojing Liu, Honglv Jiang, Kaiqin Li, Qiongfang Chen, Xiaoyan Huang, Qing Chang, Guoqiang Xu, Hong Zhu, Peng Shi, Bo Zhao RETSAT associates with DDX39B to promote fork restarting and resistance to gemcitabine based chemotherapy in pancreatic ductal adenocarcinoma J Exp Clin Cancer Res doi: 10.1186/s13046-022-02490-3. 2022 Sep 15;41(1):274.
136. Fangfang Yang, YanLi Pei, Wei Xu, Lei Rong hsa\_circ\_0003176 Suppresses the Progression of Non-Small-Cell Lung Cancer via Regulating miR-182-5p/RBM5 Axis Dis Markers doi: 10.1155/2022/8402116. 2022 Sep 23:2022:8402116.
137. Yi Zheng, Yuliang Liu, Rong Hou, Keyu Shi, Yijiao Chen, Tongying Feng, Junhui An Single-cell RNA-sequencing analysis and characterisation of testicular cells in giant panda (Ailuropoda melanoleuca) Reprod Fertil Dev doi: 10.1071/RD22039. 2022 Sep;34(14):933-943.
138. Q Y Chen, Y Yin, L Li, Y J Zhang, W He, Y Shi Geniposidic Acid Confers Neuroprotective Effects in a Mouse Model of Alzheimer's Disease through Activation of a PI3K/AKT/GAP43 Regulatory Axis J Prev Alzheimers Dis doi: 10.14283/jpad.2021.60. 2022;9(1):158-171.
139. Hongke Cai, Yi Chen, Xi Chen, Weiping Sun, Yang Li Tumor-associated macrophages mediate gastrointestinal stromal tumor cell metastasis through CXCL2/CXCR2 Cell Immunol doi: 10.1016/j.cellimm.2022.104642. 2023 Feb;384:104642.
140. Di Wang, Weiwei Liang, Di Huo, Hongyong Wang, Ying Wang, Chaohua Cong, Chunting Zhang, Shi Yan, Ming Gao, Xiaoli Su, Xingli Tan, Wenmo Zhang, Ling Han, Dongmei Zhang, Honglin Feng SPY1 inhibits neuronal ferroptosis in amyotrophic lateral sclerosis by reducing lipid peroxidation through regulation of GCH1 and TFR1 Cell Death Differ doi: 10.1038/s41418-022-01089-7. 2023 Feb;30(2):369-382.
141. Fanghua Chen, Yin Li, Ling Aye, Yingcheng Wu, Liangqing Dong, Zijian Yang, Qiang Gao, Shu Zhang FUT8 is regulated by miR-122-5p and promotes malignancies in intrahepatic cholangiocarcinoma via PI3K/AKT signaling Cell Oncol (Dordr) doi: 10.1007/s13402-022-00736-y. 2023 Feb;46(1):79-91.
142. Xiaorui Xie, Xuebo Tong, Zhihong Li, Quan Cheng, Xiaowei Wang, Yin Long, Fangbo Liu, Yonghui Wang, Juan Wang, Li Liu Use of mouse primary epidermal organoids for USA300 infection modeling and drug screening Cell Death Dis doi: 10.1038/s41419-022-05525-x. 2023 Jan 11;14(1):15.
143. Weijie Xie, Yanqin Zeng, Yunqiu Zheng, Bin Cai Activated AMPK Protects Against Chronic Cerebral Ischemia in Bilateral Carotid Artery Stenosis Mice Cell Mol Neurobiol doi: 10.1007/s10571-022-01312-6. 2023 Jul;43(5):2325-2335.
144. Xiang-Yu Tan, Yu-Ting Li, Hua-Hui Li, Li-Xiang Ma, Chui-Mian Zeng, Tian-Tian Zhang, Tu-Xiong Huang, Xiao-Di Zhao, Li Fu WNT2-SOX4 positive feedback loop promotes chemoresistance and tumorigenesis by inducing stem-cell like

- properties in gastric cancer *Oncogene* doi: 10.1038/s41388-023-02816-1. 2023 Oct;42(41):3062-3074.
145. Han Y, Wang S, Zhang Z, Ma X, Li W, Zhang X, Deng J, Wei H, Li Z, Zhang XE, Cui Z. In vivo imaging of protein-protein and RNA-protein interactions using novel far-red fluorescence complementation systems. *Nucleic Acids Res* 2014;42(13):e103.
146. Han Y, Wang S, Zhang Z, Ma X, Li W, Zhang X, Deng J, Wei H, Li Z, Zhang XE, Cui Z. In vivo imaging of protein-protein and RNA-protein interactions using novel far-red fluorescence complementation systems. *Nucleic Acids Res* 2014;42(13):e103.
147. Cao C, Huang Y, Tang Q, Zhang C, Shi L, Zhao J, Hu L, Hu Z, Liu Y, Chen L. Bidirectional juxtacrine EphrinB2/Ephs signaling promotes angiogenesis of ECs and maintains self-renewal of MSCs. *Biomaterials* 2018 Jul;172:1-13.
148. Chen D, Li Q, Meng Z, Guo L, Tang Y, Liu Z, Yin S, Qin W, Yuan Z, Zhang X, Wu C. Bright Polymer Dots Tracking Stem Cell Engraftment and Migration to Injured Mouse Liver. *Theranostics* 2017 Apr 10;7(7):1820-1834.
149. Chen D, Li Q, Meng Z, Guo L, Tang Y, Liu Z, Yin S, Qin W, Yuan Z, Zhang X, Wu C. Bright Polymer Dots Tracking Stem Cell Engraftment and Migration to Injured Mouse Liver. *Theranostics* 2017 Apr 10;7(7):1820-1834.
150. Wu CP, Zhou L, Gong HL, Du HD, Tian J, Sun S, Li JY. Establishment and characterization of a novel HPV-negative laryngeal squamous cell carcinoma cell line, FD-LSC-1, with missense and nonsense mutations of TP53 in the DNA-binding domain. *Cancer Lett* 2014 Jan 1;342(1):92-103.
151. Wu CP, Zhou L, Gong HL, Du HD, Tian J, Sun S, Li JY. Establishment and characterization of a novel HPV-negative laryngeal squamous cell carcinoma cell line, FD-LSC-1, with missense and nonsense mutations of TP53 in the DNA-binding domain. *Cancer Lett* 2014 Jan 1;342(1):92-103.
152. Wang W, Nie W, Zhou X, Feng W, Chen L, Zhang Q, You Z, Shi Q, Peng C, He C. Fabrication of heterogeneous porous bilayered nanofibrous vascular grafts by two-step phase separation technique. *Acta Biomater* 2018 Oct 1;79:168-181.
153. Shah SZA, Zhao D, Taglialatela G, Khan SH, Hussain T, Dong H, Lai M, Zhou X, Yang L. Early Minocycline and Late FK506 Treatment Improves Survival and Alleviates Neuroinflammation, Neurodegeneration, and Behavioral Deficits in Prion-Infected Hamsters. *Neurotherapeutics* 2017 Apr;14(2):463-483.
154. Shah SZ, Zhao D, Taglialatela G, Khan SH, Hussain T, Dong H, Lai M, Zhou X, Yang L. Early Minocycline and Late FK506 Treatment Improves Survival and Alleviates Neuroinflammation, Neurodegeneration, and Behavioral Deficits in Prion-Infected Hamsters. *Neurotherapeutics* 2017 Jan 12. doi: 10.1007/s13311-016-0500-0. [Epub ahead of print]
155. Shah SZ, Zhao D, Taglialatela G, Khan SH, Hussain T, Dong H, Lai M, Zhou X, Yang L. Early Minocycline and Late FK506 Treatment Improves Survival and Alleviates Neuroinflammation, Neurodegeneration, and Behavioral Deficits in Prion-Infected Hamsters. *Neurotherapeutics* 2017 Jan 12. doi: 10.1007/s13311-016-0500-0. [Epub ahead of print]
156. Shah SZA, Zhao D, Taglialatela G, Khan SH, Hussain T, Dong H, Lai M, Zhou X, Yang L. Early Minocycline and Late FK506 Treatment Improves Survival and Alleviates Neuroinflammation, Neurodegeneration, and Behavioral Deficits in Prion-Infected Hamsters. *Neurotherapeutics* 2017 Apr;14(2):463-483.
157. Lin X, Wu L, Zhang Z, Yang R, Guan Q, Hou X, Wu Q. MiR-335-5p promotes chondrogenesis in mouse mesenchymal stem cells and is regulated through two positive feedback loops. *J Bone Miner Res* 2014 Jul;29(7):1575-85.
158. Lin X, Wu L, Zhang Z, Yang R, Guan Q, Hou X, Wu Q. MiR-335-5p promotes chondrogenesis in mouse mesenchymal stem cells and is regulated through two positive feedback loops. *J Bone Miner Res* 2014 Jul;29(7):1575-85.
159. Ren J, Li W, Yan L, Jiao W, Tian S, Li D, Tang Y, Gu G, Liu H, Xu Z. Expression of CIP2A in renal cell carcinomas correlates with tumour invasion, metastasis and patients' survival. *BRIT J CANCER* 2011 Dec 6;105(12):1905-11.
160. Ren J, Li W, Yan L, Jiao W, Tian S, Li D, Tang Y, Gu G, Liu H, Xu Z. Expression of CIP2A in renal cell carcinomas correlates with tumour invasion, metastasis and patients' survival. *BRIT J CANCER* 2011 Dec 6;105(12):1905-11.
161. Zhang Y, Guan Y, Zhang T, Yuan C, Liu Y, Wang Z. Adult exposure to bisphenol A in rare minnow *Gobiocypris rarus* reduces sperm quality with disruption of testicular aquaporins. *Chemosphere* 2018 Feb;193:365-375.
162. Zhang Y, Guan Y, Zhang T, Yuan C, Liu Y, Wang Z. Adult exposure to bisphenol A in rare minnow *Gobiocypris rarus* reduces sperm quality with disruption of testicular aquaporins. *Chemosphere* 2018 Feb;193:365-375.
163. Zhang Y, Guan Y, Zhang T, Yuan C, Liu Y, Wang Z. Adult exposure to bisphenol A in rare minnow *Gobiocypris rarus* reduces sperm quality with disruption of testicular aquaporins. *Chemosphere* 2018 Feb;193:365-375.
164. Zhang YT. Effects of microRNA-129 and its target gene c-Fos on proliferation and apoptosis of hippocampal neurons in rats with epilepsy via the MAPK signaling pathway. *J Cell Physiol* 2018 Sep;233(9):6632-6643.
165. Zhang YT. Effects of microRNA-129 and its target gene c-Fos on proliferation and apoptosis of hippocampal neurons in rats with epilepsy via the MAPK signaling pathway. *J Cell Physiol* 2018 Sep;233(9):6632-6643.
166. Wu DM, Zhang YT, Lu J, Zheng YL. Effects of microRNA-129 and its target gene c-Fos on proliferation and apoptosis of hippocampal neurons in rats with epilepsy via the MAPK signaling pathway. *J Cell Physiol* 2018 Sep;233(9):6632-6643.
167. Chen XJ, Chen X, Wu WJ, Zhou Q, Gong XH, Shi BM. Effects of FGF-23-mediated ERK/MAPK signaling pathway on parathyroid hormone secretion of parathyroid cells in rats with secondary hyperparathyroidism. *J Cell Physiol* 2018 Sep;233(9):7092-7102.
168. Li GC, Cao XY, Li YN, Qiu YY, Li YN, Liu XJ, Sun XX. MicroRNA-374b inhibits cervical cancer cell proliferation and induces apoptosis through the p38/ERK signaling pathway by binding to JAM-2. *J Cell Physiol* 2018 Sep;233(9):7379-7390.
169. Guo GL, Sun LQ, Sun MH, Xu HM. LncRNA SLC8A1-AS1 protects against myocardial damage through activation of cGMP-PKG signaling pathway by inhibiting SLC8A1 in mice models of myocardial infarction. *J Cell Physiol* 2019 Jun;234(6):9019-9032.
170. Zhang Q, Wu D, Yang Y, Liu T, Liu H. Dexmedetomidine Alleviates Hyperoxia-Induced Acute Lung Injury via Inhibiting NLRP3 Inflammation Activation. *CELL PHYSIOL BIOCHEM* 2017;42(5):1907-1919.
171. Wang F, Tang J, Li P, Si S, Yu H, Yang X, Tao J, Lv Q, Gu M, Yang H, Wang Z. Chloroquine Enhances the Radiosensitivity of Bladder Cancer Cells by Inhibiting Autophagy and Activating Apoptosis. *CELL PHYSIOL BIOCHEM* 2018;45(1):54-66.
172. Wang F, Tang J, Li P, Si S, Yu H, Yang X, Tao J, Lv Q, Gu M, Yang H, Wang Z. Chloroquine Enhances the Radiosensitivity of Bladder Cancer Cells by Inhibiting Autophagy and Activating Apoptosis. *CELL PHYSIOL BIOCHEM* 2018;45(1):54-66.
173. Wang F, Tang J, Li P, Si S, Yu H, Yang X, Tao J, Lv Q, Gu M, Yang H, Wang Z. Chloroquine Enhances the Radiosensitivity of Bladder Cancer Cells by Inhibiting Autophagy and Activating Apoptosis. *CELL PHYSIOL BIOCHEM* 2018;45(1):54-66.
174. Pan BL, Tong ZW, Wu L, Pan L, Li JE, Huang YG, Li SD, Du SX, Li XD. Effects of MicroRNA-206 on Osteosarcoma Cell Proliferation, Apoptosis, Migration and Invasion by Targeting ANXA2 Through the AKT Signaling Pathway. *CELL PHYSIOL BIOCHEM* 2018;45(4):1410-1422.
175. Zhou LJ, Mo YB, Bu X, Wang JJ, Bai J, Zhang JW, Cheng AB, Ma JH, Wang YW, Xie YX. Erinacine Facilitates the Opening of the Mitochondrial Permeability Transition Pore Through the Inhibition of the PI3K/Akt/GSK-3 $\beta$  Signaling Pathway in Human Hepatocellular Carcinoma. *CELL PHYSIOL BIOCHEM* 2018;50(3):851-867.
176. Chen W, Zhang L, Zhou ZQ, Ren YQ, Sun LN, Man YL, Ma ZW, Wang ZK. Effects of Long Non-Coding RNA LINC00963 on Renal Interstitial Fibrosis and Oxidative Stress of Rats with Chronic Renal Failure via the Foxo Signaling Pathway.

- CELL PHYSIOL BIOCHEM 2018;46(2):815-828.
177. Liu J, Wang HZ, Sun Y Inhibition of CXCR4 by MicroRNA-1192 Reduces the Activation of Th17 Cells and Expression of Inflammation Factors in a Mouse Model of Vulvovaginal Candidiasis. CELL PHYSIOL BIOCHEM 2018;50(3):893-910.
178. Mao XW, Xiao JQ, Li ZY, Zheng YC, Zhang N Effects of microRNA-135a on the epithelial-mesenchymal transition, migration and invasion of bladder cancer cells by targeting GSK3 $\beta$  through the Wnt/ $\beta$ -catenin signaling pathway. Exp Mol Med 2018 Jan 19;50(1):e429.
179. Wang SJ, Cui HY, Liu YM, Zhao P, Zhang Y, Fu ZG, Chen ZN, Jiang JL. CD147 promotes Src-dependent activation of Rac1 signaling through STAT3/DOCK8 during the motility of hepatocellular carcinoma cells. ONCOTARGET 2015 Jan 1;6(1):243-57.
180. Wang SJ, Cui HY, Liu YM, Zhao P, Zhang Y, Fu ZG, Chen ZN, Jiang JL. CD147 promotes Src-dependent activation of Rac1 signaling through STAT3/DOCK8 during the motility of hepatocellular carcinoma cells. ONCOTARGET 2015 Jan 1;6(1):243-57.
181. Zhang LN, Tian H, Zhou XL, Tian SC, Zhang XH, Wu TJ Upregulation of microRNA-351 exerts protective effects during sepsis by ameliorating skeletal muscle wasting through the Tead-4-mediated blockade of the Hippo signaling pathway. FASEB J 2018 Jul 24:fj201800151RR.
182. Liu X, Li Y, Zhang X, Liu XY, Peng A, Chen Y, Meng L, Chen H, Zhang Y, Miao X, Zheng L, Huang K Inhibition of kinesin family member 20B sensitizes hepatocellular carcinoma cell to microtubule-targeting agents by blocking cytokinesis. Cancer Sci 2018 Nov;109(11):3450-3460.
183. Men X, Wang L, Yu W, Ju Y. Cullin7 is required for lung cancer cell proliferation and is overexpressed in lung cancer. Oncol Res 2015;22(2):123-8.
184. Men X, Wang L, Yu W, Ju Y. Cullin7 is required for lung cancer cell proliferation and is overexpressed in lung cancer. Oncol Res 2015;22(2):123-8.
- 注: 更多使用本产品的文献请参考产品网页。

Version 2024.03.12