

## Hoechst 33342活细胞染色液(100X)

产品编号	产品名称	包装
C1027	Hoechst 33342活细胞染色液(100X)	0.1ml

### 产品简介:

- Hoechst 33342活细胞染色液(100X) (Hoechst 33342 Staining Solution for Live Cells, 100X), 是一种适用于活细胞细胞核染色的溶液。仅需染色10分钟就能用荧光显微镜观察到非常明亮的细胞核蓝色荧光染色。
- 本产品也适用于固定后的细胞或组织的细胞核染色。
- Hoechst 33342, 也称bisBenzimide H 33342或HOE 33342。分子式为 $C_{27}H_{28}N_6O \cdot 3HCl \cdot 3H_2O$ , 分子量为615.99, CAS Number 23491-52-3。Hoechst 33342的最大激发波长为346nm, 最大发射波长为460nm; Hoechst 33342和双链DNA结合后, 最大激发波长为350nm, 最大发射波长为461nm。
- Hoechst 33342是一种可以穿透细胞膜的蓝色荧光染料, 对细胞的毒性较低。
- Hoechst 33342染色常用于细胞凋亡检测, 染色后用荧光显微镜观察或流式细胞仪检测。Hoechst 33342也常用于普通的细胞核染色, 或常规的DNA染色。
- 本产品用于活细胞染色的效果图参考图1。

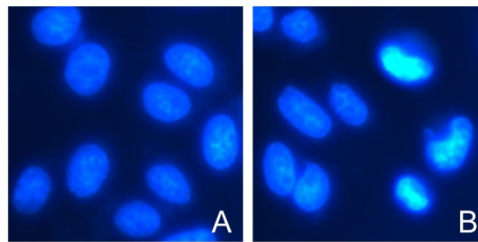


图1. 正常培养的HeLa细胞用本产品染色后的实拍效果图。图A为正常细胞Hoechst 33342的染色效果图。图B中除了正常细胞外, 还清晰可见呈现致密浓染的凋亡细胞。

### 包装清单:

产品编号	产品名称	包装
C1027	Hoechst 33342活细胞染色液(100X)	0.1ml
—	说明书	1份

### 保存条件:

-20°C避光保存, 一年有效。

### 注意事项:

- 本产品浓度经过碧云天的优化, 确保可以满足活细胞染色及各种常规染色的需要。如需使用特定浓度的 Hoechst 33342, 请选购碧云天的粉末装 Hoechst 33342 (C1022)。
- 荧光染料都存在淬灭的问题, 建议染色后尽量当天完成检测。
- 为减缓荧光淬灭可以使用抗荧光淬灭封片液。抗荧光淬灭封片液(P0126)可以向碧云天订购。
- Hoechst 33342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. 对于活细胞或培养的组织:

- 对于培养器皿内的活细胞或组织, 在培养液中均匀滴加适量的Hoechst 33342活细胞染色液(100X)至终浓度为1X, 轻柔混匀。例如对于十二孔板中培养的细胞, 每孔有1ml的培养液, 每孔需要加入10 $\mu$ l Hoechst 33342活细胞染色液(100X)。培养液中的血清、酚红等都不会对染色产生干扰。
- 在适宜于细胞培养的温度孵育10分钟。吸除含染料的培养液, 用培养液或PBS洗涤2-3次即可在荧光显微镜下观察。细胞发生凋亡时, 会看到凋亡细胞的细胞核呈致密浓染, 或呈碎块状致密浓染。具体示例见图1。如果对于染色效果的要求不是特别高,

染色5分钟，用培养液或PBS洗涤1次即可在荧光显微镜下观察。为避免凋亡细胞随培养液或PBS被吸除，在吸除液体前，对于用多孔板中培养的细胞，最好用多孔板离心机离心一下以充分沉淀那些已经漂浮起来的凋亡细胞。

## 2. 对于固定的细胞或组织：

- 对于细胞或组织样品，固定后，适当洗涤去除固定剂。随后如果需要进行免疫荧光染色，则先进行免疫荧光染色，染色完毕后按后续步骤进行Hoechst 33342染色。如果不需要进行其它染色，则直接进行后续的Hoechst 33342染色。
- 对于贴壁细胞或组织切片，加入少量用免疫染色洗涤液、PBS或生理盐水稀释至1X的本产品，覆盖住样品即可。对于悬浮细胞，至少加入待染色样品体积3倍的染色液，混匀。室温放置3-5分钟。
- 吸除Hoechst 33342染色液，用免疫染色洗涤液、PBS或生理盐水洗涤2-3次，每次3-5分钟。
- 直接在荧光显微镜下观察或封片后荧光显微镜下观察。细胞发生凋亡时，会看到凋亡细胞的细胞核呈致密浓染，或呈碎块状致密浓染。

## 相关产品：

产品编号	产品名称	包装
C1002	DAPI	5mg/ml×0.2ml
C1005	DAPI 染色液	10ml
C1006	DAPI 染色液	50ml
C1011	Hoechst 33258	10mg
C1017	Hoechst 33258 染色液	10ml
C1018	Hoechst 33258 染色液	50ml
C1022	Hoechst 33342	10mg
C1025	Hoechst 33342 染色液	10ml
C1026	Hoechst 33342 染色液	50ml
C1027	Hoechst 33342 活细胞染色液(100X)	0.1ml
C1028	Hoechst 33342 活细胞染色液(100X)	0.5ml
C1029	Hoechst 33342 活细胞染色液(100X)	3ml

## 使用本产品的文献：

- You F, Li Q, Jin G, Zheng Y, Chen J, Yang H. Genistein protects against Aβ<sub>25-35</sub> induced apoptosis of PC12 cells through JNK signaling and modulation of Bcl-2 family messengers. *BMC Neurosci.* 2017 Jan 12;18(1):12.
- Wang Z, Liao K, Zuo W, Liu X, Qiu Z, Gong Z, Liu C, Zeng Q, Qian Y, Jiang L, Bu Y, Hong S, Hu G. Depletion of NFBD1/MDC1 Induces Apoptosis in Nasopharyngeal Carcinoma Cells Through the p53-ROS-Mitochondrial Pathway. *Oncol Res.* 2017 Jan 2;25(1):123-136.
- Hu Y, Xiong LL, Zhang P, Wang TH. Microarray expression profiles of genes in lung tissues of rats subjected to focal cerebral ischemia-induced lung injury following bone marrow-derived mesenchymal stem cell transplantation. *Int J Mol Med.* 2017 Jan;39(1):57-70.
- Zhang Y, Wu JY, Weng LH, Li XX, Yu LJ, Xu Y. Valproic acid protects against MPP<sup>+</sup>-mediated neurotoxicity in SH-SY5Y Cells through autophagy. *Neurosci Lett.* 2017 Jan 18;638:60-68.
- Fan Y, Liu J, Liu D, Zhou Z, Bao Y, Wang J, Zhao Q, Xu Y. NSCA-1-a novel N-substituted coumalamide derivative-increases Adriamycin sensitivity in HepG2/adriamycin cells through modulating Akt/GSK-3β signaling and p53-dependant apoptotic pathway. *ENVIRON TOXICOL CHEM.* 2017 Jan;49:1-7
- Chang S, Ruan WC, Xu YZ, Wang YJ, Pang J, Zhang LY, Liao H, Pang T. The natural product 4,10-aromadendranediol induces neuritogenesis in neuronal cells in vitro through activation of the ERK pathway. *Acta Pharmacol Sin.* 2017 Jan;38(1):29-40.
- Wang Y1, Qiu Y1, Yin S1, Zhang L1, Shi K1, Gao H1, Zhang Z1, He Q1. A functional nanocarrier that copenetrates extracellular matrix and multiple layers of tumor cells for sequential and deep tumor autophagy inhibitor and chemotherapeutic delivery. *Autophagy.* 2017 Feb;13(2):359-370.
- Wen Y, He W, Jiang M, Zeng M, Cai L. Deriving cells expressing markers of female germ cells from premature ovarian failure patient-specific induced pluripotent stem cells. *Regen Med.* 2017 Mar;12(2):143-152.
- Zhai Y1, Li Y2, Wang Y3, Cui J2, Feng K4, Kong X2, Chen L5. Psoralidin, a prenylated coumestan, as a novel anti-osteoporosis candidate to enhance bone formation of osteoblasts and decrease bone resorption of osteoclasts. *Eur J Pharmacol.* 2017 Apr 15;801:62-71.
- Wu J, Yang X, Lu H, Liu L, Xu B, Zheng S, Yu B, Jie K, Wan F. Inhibitory effect and mechanism of exogenous mammalian sterile 20-like kinase 1 on the growth of human colorectal cancer. *Oncol Lett.* 2017 Apr;13(4):2656-2664.
- Guo Y, Song Z, Zhou M, Yang Y, Zhao Y, Liu B, Zhang X. Infiltrating macrophages in diabetic nephropathy promote podocytes apoptosis via TNF-α-ROS-p38MAPK pathway. *ONCOTARGET.* 2017 Jun 7;8(32):53276-53287.
- Sun L, Li Y, Jia X, Wang Q, Li Y, Hu M, Tian L, Yang J, Xing W, Zhang W, Wang J, Xu H, Wang L, Zhang D, Ren H. Neuroprotection by IFN-γ via astrocyte-secreted IL-6 in acute neuroinflammation. *ONCOTARGET.* 2017 Jun 20;8(25):40065-40078.
- Xiong LL, Liu F, Lu BT, Zhao WL, Dong XJ, Liu J, Zhang RP, Zhang P, Wang TH. Bone Marrow Mesenchymal Stem-Cell Transplantation Promotes Functional Improvement Associated with CNTF-STAT3 Activation after Hemi-Sectioned Spinal Cord Injury in Tree Shrews. *Front Cell Neurosci.* 2017 Jun 28;11:172.
- Wu X, Gao H, Sun W, Yu J, Hu H, Xu Q, Chen X. Nepetoidin B, a Natural Product, Inhibits LPS-stimulated Nitric Oxide Production via Modulation of iNOS Mediated by NF-κB/MKP-5 Pathways. *Phytother Res.* 2017 Jul;31(7):1072-1077.
- Yan X, Xun M, Dou X, Wu L, Han Y, Zheng J. Regulation of Na<sup>+</sup>-K<sup>+</sup>-ATPase effected high glucose-induced myocardial cell injury

- through c-Src-dependent NADPH oxidase/ROS pathway. *Exp Cell Res.* 2017 Aug 15;357(2):243-251.
16. Liu JC, Lai FN, Li L, Sun XF, Cheng SF, Ge W, Wang YF, Li L, Zhang XF, De Felici M, Dyce PW, Shen W. Di (2-ethylhexyl) phthalate exposure impairs meiotic progression and DNA damage repair in fetal mouse oocytes in vitro. *Cell Death Dis.* 2017 Aug 3;8(8):e2966.
  17. Liu XY, Zhang LJ, Chen Z, Liu LB. The PTEN inhibitor bpV(pic) promotes neuroprotection against amyloid  $\beta$ -peptide(25-35)-induced oxidative stress and neurotoxicity. *Neurol Res.* 2017 Aug;39(8):758-765.
  18. Shan ZL, Zhong L, Xiao CL, Gan LG, Xu T, Song H, Yang R, Li L, Liu BZ. Shikonin suppresses proliferation and induces apoptosis in human leukemia NB4 cells through modulation of MAPKs and c Myc. *Mol Med Rep.* 2017 Sep;16(3):3055-3060.
  19. Hao J, Yang Z, Wang L, Zhang Y, Shu Y, Jiang L, Hu Y, Lv W, Dong P, Liu Y. Downregulation of BRD4 inhibits gallbladder cancer proliferation and metastasis and induces apoptosis via PI3K/AKT pathway. *Int J Oncol.* 2017 Sep;51(3):823-831.
  20. Liu X, Qiu Z, Wang Z, Zuo W, Gong Z, Liu C, Zeng Q, Qian Y, Jiang L, Li Y, Bu Y, Hu G. NFBFD1/MDC1 participates in the regulation of proliferation and apoptosis in human laryngeal squamous cell carcinoma. *Clin Transl Oncol.* 2017 Sep 18.
  21. Ying C, Xiao BD, Qin Y, Wang BR, Liu XY, Wang RW, Fang L, Yan H, Zhou XM, Wang YG. GOLPH2-regulated oncolytic adenovirus, GD55, exerts strong killing effect on human prostate cancer stem-like cells in vitro and in vivo. *Acta Pharmacol Sin.* 2017 Sep 7.
  22. Liang J, Wang WF, Xie S, Zhang XL, Qi WF, Zhou XP, Hu JX, Shi Q, Yu RT.  $\beta$ -transducin repeat-containing E3 ubiquitin protein ligase inhibits migration, invasion and proliferation of glioma cells. *Oncol Lett.* 2017 Sep;14(3):3131-3135.
  23. Geng YD, Zhang C, Lei JL, Yu P, Xia YZ, Zhang H, Yang L, Kong LY. Walsurionoid B induces mitochondrial and lysosomal dysfunction leading to apoptotic rather than autophagic cell death via ROS/p53 signaling pathways in liver cancer. *Biochem Pharmacol.* 2017 Oct 15;142:71-86.
  24. Chen GH, Xu CS, Zhang J, Li Q, Cui HH, Li XD, Chang LP, Tang RJ, Xu JY, Tian XQ, Huang PS, Xu J, Jin C, Yang YJ. Inhibition of miR-128-3p by Tongxinluo Protects Human Cardiomyocytes from Ischemia/reperfusion Injury via Upregulation of p70s6k1/p-p70s6k1. *Front Pharmacol.* 2017 Oct 30;8:775.
  25. Liu W, Wang X, Liu Z, Wang Y, Yin B, Yu P, Duan X, Liao Z, Chen Y, Liu C, Li X, Dai Y, Tao Z. SGK1 inhibition induces autophagy-dependent apoptosis via the mTOR-Foxo3a pathway. *BRIT J CANCER.* 2017 Oct 10;117(8):1139-1153.
  26. Li Y, Sun Y, Cao T, Su Q, Li Z, Huang M, Ouyang R, Chang H, Zhang S, Miao Y. A cation-exchange controlled core-shell MnS@Bi2S3 theranostic platform for multimodal imaging guided radiation therapy with hyperthermia boost. *Nanoscale.* 2017 Oct 5;9(38):14364-14375.
  27. Qian L, Li X, Ye P, Wang G, Dai W, Liu Y, Gao Q, Shen G. Oxymatrine induces apoptosis and inhibits invasion in Gallbladder carcinoma via PTEN/PI3K/AKT pathway. *Cytotechnology.* 2017 Nov 23.
  28. Zhao C, Yao X, Chen X, Wu W, Xi F, Yang G, Yu T. Knockdown of ubiquitin D inhibits adipogenesis during the differentiation of porcine intramuscular and subcutaneous preadipocytes. *CELL PROLIFERAT.* 2017 Nov 23.
  29. Yang LL1, Zhao Y1, Luo SM1, Ma JY1, Ge ZJ1, Shen W1, Yin S2. Toxic Effects and Possible Mechanisms of Hydrogen Sulfide and/or Ammonia on Porcine Oocyte Maturation in vitro. *Toxicol Lett.* 2017 Dec 29. pii: S0378-4274(17)31529-1.
  30. Xiao B, Qin Y, Ying C, Ma B, Wang B, Long F, Wang R, Fang L, Wang Y. Combination of oncolytic adenovirus and luteolin exerts synergistic antitumor effects in colorectal cancer cells and a mouse model. *Mol Med Rep.* 2017 Dec;16(6):9375-9382.
  31. Li X, Yan X, Wang Y, Wang J, Zhou F, Wang H, Xie W, Kong H. NLRP3 inflammasome inhibition attenuates silica-induced epithelial to mesenchymal transition (EMT) in human bronchial epithelial cells. *Exp Cell Res.* 2017 Dec 16. pii: S0014-4827(17)30668-7.
  32. Xu Z, Zheng M, Zhang L, Zhang X, Zhang Y, Cui X, Gong X, Xi R, Bai R. Effect of ATP and Bax on the apoptosis of Eimeria tenella host cells. *BMC Vet Res.* 2017 Dec 28;13(1):399.
  33. Sun Y, Wang C, Meng Q, Liu Z, Huo X, Sun P, Sun H, Ma X, Peng J, Liu K. Targeting P-glycoprotein and SORCIN: Dihydropyridinyl strengthens anti-proliferative efficiency of adriamycin via MAPK/ERK and Ca<sup>2+</sup>-mediated apoptosis pathways in MCF-7/ADR and K562/ADR. *J Cell Physiol.* 2018 Apr;233(4):3066-3079.
  34. Guo Q, Zheng M, Xu Y, Wang N, Zhao W. MiR-384 induces apoptosis and autophagy of non-small cell lung cancer cells through the negative regulation of Collagen  $\alpha$ -1(X) chain gene. *BIOSCIENCE REP.* 2019 Feb 1;39(2). pii: BSR20181523.
  35. Ayman M Mahmoud, Fiona L Wilkinson, Mansur A Sandhu, Julia M Dos Santos, M Yvonne Alexander. Modulating Oxidative Stress in Drug-Induced Injury and Metabolic Disorders: The Role of Natural and Synthetic Antioxidants. *Oxid Med Cell Longev.* 2019 Jun 27;2019:3206401.
  36. Zhang J, Si H, Li B, Zhou X, Zhang J. Myrslignan Exhibits Activities Against Toxoplasma gondii RH Strain by Triggering Mitochondrial Dysfunction. *Front Microbiol.* 2019 Sep 18;10:2152.
  37. Tang LX, Su SF, Wan Q, He P, Xiang Y, Cheng XM. Novel long non-coding RNA LBX2-AS1 indicates poor prognosis and promotes cell proliferation and metastasis through Notch signaling in non-small cell lung cancer. *EUR REV MED PHARMACO.* 2019 Sep;23(17):7419-7429.
  38. Jiyue Ge, Likai Mao, Weiqiang Xu, Wenge Fang, Ningning Wang, Dawen Ye, Zhuang Dong, Han Guan, Chao Guan. miR-103a-3p Suppresses Cell Proliferation and Invasion by Targeting Tumor Protein D52 in Prostate Cancer. *J Invest Surg.* 2020 Mar 13;1-9.
  39. Lingqi Zhou, Hai Tang, Fang Wang, Shanshan Ou, Tong Wu, Yinchao Fang, Jie Xu, Kaihua Guo. Cyclovirobuxine D inhibits cell proliferation and migration and induces apoptosis in human glioblastoma multiforme and low-grade glioma. *Oncol Rep.* 2020 Mar;43(3):807-816.
  40. Peng Chen, Xuejie Li, Ruonan Zhang, Shuiping Liu, Yu Xiang, Mingming Zhang, Xiaying Chen, Ting Pan, Lili Yan, Jiao Feng, Ting Duan, Da Wang, Bi Chen, Ting Jin, Wengang Wang, Liuxi Chen, Xingxing Huang, Wenzheng Zhang, Yitian Sun, Guohua Li, Lingpan Kong, Xiaohui Chen, Yongqiang Li, Zuyi Yang, Qin Zhang, Lvjia Zhuo, Xinbing Sui, Tian Xie. Combinative treatment of  $\beta$ -elemene and cetuximab is sensitive to KRAS mutant colorectal cancer cells by inducing ferroptosis and inhibiting epithelial-mesenchymal transformation. *Theranostics.* 2020 Apr 6;10(11):5107-5119.
  41. Lei Lai, Yizhou Xu, Lan Kang, Jianmin Yang, Gangjie Zhu. LncRNA KCNQ1OT1 contributes to cardiomyocyte apoptosis by targeting FUS in heart failure. *Exp Mol Pathol.* 2020 Aug;115:104480.
  42. Li Mao, Mei-Ling Zuo, Ai-Ping Wang, Ying Tian, Li-Chen Dong, Tao-Ming Li, Da-Bin Kuang, Gui-Lin Song, Zhong-Bao Yang. Low expression of miR-532-3p contributes to cerebral ischemia/reperfusion oxidative stress injury by directly targeting NOX2. *Mol Med Rep.* 2020 Sep;22(3):2415-2423.
  43. Runqing Geng, Yuanyuan Ren, Rong Rao, Xi Tan, Hong Zhou, Xiangliang Yang, Wei Liu, Qunwei Lu. Titanium Dioxide Nanoparticles Induced HeLa Cell Necrosis under UVA Radiation through the ROS-mPTP

- Pathway. *Nanomaterials* (Basel). 2020 Oct 15;10(10):2029.
44. Ying Hua, Jiali Wu, Muqing Fu, Jinyue Liu, Xiaoxia Li, Bao Zhang, Wei Zhao, Chengsong Wan. Enterohemorrhagic *Escherichia coli* Effector Protein EspF Interacts With Host Protein ANXA6 and Triggers Myosin Light Chain Kinase (MLCK)-Dependent Tight Junction Dysregulation. *Front Cell Dev Biol.* 2020 Dec 23;8:613061.
  45. Gu Y, Cai R, Zhang C, Xue Y, Pan Y, Wang J, Zhang Z. miR-132-3p boosts caveolae-mediated transcellular transport in glioma endothelial cells by targeting PTEN/PI3K/PKB/Src/Cav-1 signaling pathway. *ANN ONCOL.*
  46. Bin Han, Qiaohong Wei, Fan Wu, Han Hu, Chuan Ma, Lifeng Meng, Xufeng Zhang, Mao Feng, Yu Fang, Olav Rueppell, Jianke Li. Tachykinin signaling inhibits task-specific behavioral responsiveness in honeybee workers. *Elife.* 2021 Mar 24;10:e64830.
  47. Hui Huang, Youpei Lin, Wenrui Ma, Jiannan Liu, Jing Han, Xiaoyi Hu, Meilin Tang, Shiqiang Yan, Mieradilijiang Abudupataer, Chenping Zhang, Qiang Gao, Weijia Zhang. A pre-screening strategy to assess resected tumor margins by imaging cytoplasmic viscosity and hypoxia. *Elife.* 2021 Oct 11;10:e70471.
  48. Peng Xu, Lan Zhang, Yao Xiao, Wei Li, Zhiqiang Hu, Rukui Zhang, Jin Li, Feizhen Wu, Yanping Xi, Qingping Zou, Zhentian Wang, Rui Guo, Honghui Ma, Shihua Dong, Min Xiao, Zhicong Yang, Xiaoguang Ren, Chaochun Wei, Wenqiang Yu. UHRF1 regulates alternative splicing by interacting with splicing factors and U snRNAs in a H3R2me involved manner. *Hum Mol Genet.* 2021 Nov 1;30(22):2110-2122.
  49. Chuanqi Wang, Lingwei Ruan, Hong Shi, Wenyang Lin, Linmin Liu, Sujie Li. Phosphorylation of Shrimp Tcf by a Viral Protein Kinase WSV083 Suppresses Its Antiviral Effect. *Front Immunol.* 2021 Aug 2;12:698697.
  50. Lingtao Yang, Wei Chen, Li Li, Yueyue Xiao, Shilin Fan, Quan Zhang, Tian Xia, Mengjie Li, Yazhen Hong, Tongjin Zhao, Qiyuan Li, Wen-Hsien Liu, Nengming Xiao. Ddb1 Is Essential for the Expansion of CD4+ Helper T Cells by Regulating Cell Cycle Progression and Cell Death. *Front Immunol.* 2021 Aug 30;12:722273.
  51. Yang Zhang, Weifang Liu, Yanqi Zhong, Qi Li, Mengying Wu, Liu Yang, Xiaoxia Liu, Li Zou. Metformin Corrects Glucose Metabolism Reprogramming and NLRP3 Inflammasome-Induced Pyroptosis via Inhibiting the TLR4/NF- $\kappa$ B/PPKFB3 Signaling in Trophoblasts: Implication for a Potential Therapy of P. *Oxid Med Cell Longev.* 2021 Nov 11;2021:1806344.
  52. Meng He, Kun Qian, Ying Zhang, Xu-Feng Huang, Chao Deng, Baohua Zhang, Guanbin Gao, Jing Li, Hao Xie, Taolei Sun. Olanzapine-Induced Activation of Hypothalamic Astrocytes and Toll-Like Receptor-4 Signaling via Endoplasmic Reticulum Stress Were Related to Olanzapine-Induced Weight Gain. *Front Neurosci.* 2021 Jan 13;14:589650.
  53. Minghui Li, Mengmeng Qin, Ge Song, Hailiang Deng, Dakuan Wang, Xueqing Wang, Wenbing Dai, Bing He, Hua Zhang, Qiang Zhang. A biomimetic antitumor nanovaccine based on biocompatible calcium pyrophosphate and tumor cell membrane antigens. *Asian J Pharm Sci.* 2021 Jan;16(1):97-109.
  54. Qingshan Shen, Chunhui Zhang, Haizhen Mo, Hongru Zhang, Xiaojie Qin, Juan Li, Zhiqiang Zhang, Aurore Richel. Fabrication of chondroitin sulfate calcium complex and its chondrocyte proliferation in vitro. *Carbohydr Polym.* 2021 Feb 15;254:117282.
  55. Lu Chen, Liucheng Zhang, Hongbo Zhang, Xiaoming Sun, Dan Liu, Jianming Zhang, Yuguang Zhang, Liying Cheng, Hélder A Santos, Wenguo Cui. Programmable immune activating electrospun fibers for skin regeneration. *Bioact Mater.* 2021 Mar 11;6(10):3218-3230.
  56. Feng Yao, Zhen Jin, Xiaohan Lv, Zihan Zheng, Hongqian Gao, Ying Deng, Yizhen Liu, Lifang Chen, Weirong Wang, Jianyu He, Jianli Gu, Rong Lin. Hydroxytyrosol Acetate Inhibits Vascular Endothelial Cell Pyroptosis via the HDAC11 Signaling Pathway in Atherosclerosis. *Front Pharmacol.* 2021 Apr 23;12:656272.
  57. Hui Li, Nan Niu, Jihui Yang, Fei Dong, Tingrui Zhang, Shasha Li, Wei Zhao. Nuclear respiratory factor 1 protects H9C2 cells against hypoxia-induced apoptosis via the death receptor pathway and mitochondrial pathway. *Cell Biol Int.* 2021 Aug;45(8):1784-1796.
  58. Ling Hu, Xi Pan, Jinyue Hu, Hong Zeng, Xueting Liu, Manli Jiang, Binyuan Jiang. Proteasome inhibitors decrease paclitaxel-induced cell death in nasopharyngeal carcinoma with the accumulation of CDK1/cyclin B1. *Int J Mol Med.* 2021 Oct;48(4):193.
  59. Yuhan Liu, Jiabin Zhou, Yingying Luo, Jinxiao Li, Luorui Shang, Fangyuan Zhou, Shenglan Yang. Honokiol alleviates LPS-induced acute lung injury by inhibiting NLRP3 inflammasome-mediated pyroptosis via Nrf2 activation in vitro and in vivo. *Chin Med.* 2021 Nov 29;16(1):127.
  60. Qian Li, Hong Li, Xiuting Yao, Conghui Wang, Haiqing Liu, Dan Xu, Chenxi Yang, Hong Zhuang, Yu Xiao, Rui Liu, Sinuo Shen, Shaoyang Zhou, Chengfu, Yifan Wang, Gaojun Teng, Lijie Liu. Stress Response and Hearing Loss Differentially Contribute to Dynamic Alterations in Hippocampal Neurogenesis and Microglial Reactivity in Mice Exposed to Acute Noise Exposure. *Front Neurosci.* 2021 Dec 8;15:749925.
  61. Feifei Li, Xiaojie Zhao, Hao Li, Yu Liu, Yu Zhang, Xiaopeng Huang, Jia Cao, Fen Du, Dongfang Wu, Hong Yu. Hepatic lysosomal acid lipase drives the autophagy-lysosomal response and alleviates cholesterol metabolic disorder in ApoE deficient mice. *Biochim Biophys Acta Mol Cell Biol Lipids.* 2021 Dec;1866(12):159027.
  62. Xiao-Chuan Duan, Li-Yuan Peng, Xin Yao, Mei-Qi Xu, Hui Li, Shuai-Qiang Zhang, Zhuo-Yue Li, Jing-Ru Wang, Zhen-Han Feng, Guang-Xue Wang, Ai Liao, Ying Chen, Xuan Zhang. The synergistic antitumor activity of 3-(2-nitrophenyl) propionic acid-paclitaxel nanoparticles (NPPA-PTX NPs) and anti-PD-L1 antibody inducing immunogenic cell death. *Drug Deliv.* 2021 Dec;28(1):800-813.
  63. Linhai Zhu, Ying Wang, Wang Lv, Xiao Wu, Hongxu Sheng, Cheng He, Jian Hu. Schizandrin A can inhibit non-small cell lung cancer cell proliferation by inducing cell cycle arrest, apoptosis and autophagy. *Int J Mol Med.* 2021 Dec;48(6):214.
  64. Hao Zhao, Yue Xu, Xinlei Song, Qingchen Zhang, Yajie Wang, Haiyan Yin, Xiaohui Bai, Jianfeng Li. Cisplatin induces damage of auditory cells: Possible relation with dynamic variation in calcium homeostasis and responding channels. *Eur J Pharmacol.* 2022 Jan 5;914:174662.
  65. Fangfei Li, Xiaoqiu Wu, Xuekun Fu, Jin Liu, Wangze Song, Gary Guishan Xiao, Aiping Lu, Ge Zhang. Poly (ADP-ribose) polymerase 1 (PARP1) inhibition promotes pulmonary metastasis of osteosarcoma by boosting ezrin phosphorylation. *Int J Biol Sci.* 2022 Jan 9;18(3):1238-1253.
  66. Hanxun Yao, Xiaobin Li, Xuyan Pan, Jie Xu, Shufa Zhao, Zhongzhou Su, Sheng Qiu. Fraxetin exerts anticancer effect in glioma by suppressing MiR-21-3p. *Drug Dev Res.* 2022 Apr;83(2):501-511.
  67. Lei Chen, Yang Yan, Fangen Kong, Jikai Wang, Jia Zeng, Zhen Fang, Zheyang Wang, Zhigang Liu, Fei Liu. Contribution of Oxidative Stress Induced by Sonodynamic Therapy to the Calcium Homeostasis Imbalance Enhances Macrophage Infiltration in Glioma Cells. *Cancers* (Basel). 2022 Apr 18;14(8):2036.
  68. Jinrong Bai, Na Xie, Ya Hou, Xiaorui Chen, Yao Hu, Yi Zhang, Xianli Meng, Xiaobo Wang, Ce Tang. The enhanced mitochondrial dysfunction by cantleyoside confines inflammatory response and promotes apoptosis of human HFLS-RA cell line via AMPK/Sirt1/NF- $\kappa$ B pathway activation. *Biomed Pharmacother.* 2022 May;149:112847.

69. Pengpeng Duan, Jin Tan, Yuyang Miao, Qiang Zhang. PINK1/Parkin-Mediated Mitophagy Plays a Protective Role in Albumin Overload-Induced Renal Tubular Cell Injury. *Front Biosci (Landmark Ed)*. 2022 Jun 7;27(6):184.
70. Ruijun Bai, Michael Z Miao, Hui Li, Yiqing Wang, Ruixue Hou, Ke He, Xuan Wu, Hongyu Jin, Chao Zeng, Yang Cui, Guanghua Lei. Increased Wnt/ $\beta$ -catenin signaling contributes to autophagy inhibition resulting from a dietary magnesium deficiency in injury-induced osteoarthritis. *Arthritis Res Ther*. 2022 Jul 8;24(1):165.
71. Yukang Wen, Zhengkun Chen, Yaqin Tian, Mei Yang, Qingshuang Dong, Yujiao Yang, Honglei Ding. Incomplete autophagy promotes the proliferation of *Mycoplasma hyopneumoniae* through the JNK and Akt pathways in porcine alveolar macrophages. *Vet Res*. 2022 Aug 4;53(1):62.
72. Xin Xu, Xiao-Fang Xie, Yan-Hong Dong, Hui-Qiong Zhang, Cheng Peng. Ginsenoside Rg1 Reduces Cardiotoxicity While Increases Cardioprotective Effect of Aconitine in vitro. *Chin J Integr Med*. 2022 Aug;28(8):693-701.
73. Dandan Feng, Jiang Li, Liang Guo, Jing Liu, Shaochen Wang, Xiuyuan Ma, Yunxuan Song, Ju Liu, Enkui Hao. DDX3X alleviates doxorubicin-induced cardiotoxicity by regulating Wnt/ $\beta$ -catenin signaling pathway in an in vitro model. *J Biochem Mol Toxicol*. 2022 Aug;36(8):e23077.
74. Yang Zhang, Fei He, Yanning Zhang, Qian Dai, Qintong Li, Jing Nan, Ruidong Miao, Bo Cheng. Exploration of the regulatory relationship between KRAB-Zfp clusters and their target transposable elements via a gene editing strategy at the cluster specific linker-associated sequences by CRISPR-Ca. *Mob DNA*. 2022 Nov 10;13(1):25.
75. Tao Tao, Xiangxin Chen, Yan Zhou, Qiang Zheng, Sen Gao, Jinwei Wang, Pengfei Ding, Xiaojian Li, Zheng Peng, Yue Lu, Yongyue Gao, Zong Zhuang, Chun-Hua Hang, Wei Li. Continued P2X7 activation leads to mitochondrial fission and compromising microglial phagocytosis after subarachnoid haemorrhage. *J Neurochem*. 2022 Dec;163(5):419-437.
76. Hong Zhuang, Xiuting Yao, Hong Li, Qian Li, Chenxi Yang, Conghui Wang, Dan Xu, Yu Xiao, Yuan Gao, Jiayi Gao, Mingze Bi, Rui Liu, Gaojun Teng, Lijie Liu. Long-term high-fat diet consumption by mice throughout adulthood induces neurobehavioral alterations and hippocampal neuronal remodeling accompanied by augmented microglial lipid accumulation. *Brain Behav Immun*. 2022 Feb;100:155-171.
77. Xiancheng Qiu, Qianke Tao, Lihan Zhang, Chenghao Kuang, Yuke Xie, Lifang Zhang, Shigang Yin, Jianhua Peng, Yong Jiang. Deletion of Bak1 alleviates microglial necroptosis and neuroinflammation after experimental subarachnoid hemorrhage. *J Neurochem*. 2023 Mar;164(6):829-846.
78. Yilong Yao, Yunlu Wang, Fupeng Wang, Chaoyi Meng, Jiaqiang Niu, Ming Guo, Suolang Sizhu, Yefen Xu. BMP15 Modulates the H19/miR-26b/SMAD1 Axis Influences Yak Granulosa Cell Proliferation, Autophagy, and Apoptosis. *Reprod Sci*. 2023 Apr;30(4):1266-1280.
79. Jiye Li, Dongsheng Yu, Chenhui He, Qiwen Yu, Zhongkun Huo, Yi Zhang, Shuijun Zhang. KLF6 alleviates hepatic ischemia-reperfusion injury by inhibiting autophagy. *Cell Death Dis*. 2023 Jul 1;14(7):393.

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