

BeyoECL Star (特超敏ECL化学发光试剂盒) (试用装)

产品编号	产品名称	包装
P0018AFT	BeyoECL Star (特超敏ECL化学发光试剂盒) (试用装)	20ml
P0018AS	BeyoECL Star (特超敏ECL化学发光试剂盒)	100ml
P0018AM	BeyoECL Star (特超敏ECL化学发光试剂盒)	500ml

产品简介:

- 碧云天生产的Western荧光检测试剂BeyoECL Star是一种特超敏ECL化学发光试剂盒, 发光效果显著优于BeyoECL Plus, 可与二抗上偶联的辣根过氧化物酶(horseradish peroxidase, HRP)发生化学反应, 发出荧光, 从而可以通过用X光片压片或其它化学发光成像设备检测样品。
- 碧云天生产的Western荧光检测试剂目前共有三种, 分别是P0018S/P0018M BeyoECL Plus、P0018AS/P0018AM BeyoECL Star和P0018FS/P0018FM BeyoECL Moon。常规的Western检测, 优先推荐使用BeyoECL Star。对于丰度比较高的目的蛋白的检测, 例如内参蛋白等的检测, 推荐使用性价比更高的BeyoECL Plus。对于低丰度较难检测的目的蛋白, 优先推荐使用检测灵敏度最高的BeyoECL Moon。但对于丰度适中的目的蛋白的检测, 不太推荐使用BeyoECL Moon, 因为使用BeyoECL Moon时由于检测灵敏度特别高, 容易产生过曝的现象。
- BeyoECL Star灵敏度极高, 比DAB显色的灵敏度至少高1000倍, 比Amersham公司的ECL或碧云天以前生产的BeyoECL的灵敏度高100-500倍左右, 比碧云天生产的BeyoECL Plus的灵敏度高约5-10倍(参考图1), 比原Pierce公司(现Thermo公司)的SuperSignal West Pico Substrate的灵敏度高10倍以上, 实际检测效果与原Pierce公司的SuperSignal West Dura和SuperSignal West Femto的检测灵敏度相近。对于辣根过氧化物酶的最低检测灵敏度可以达到飞克级, 500飞克辣根过氧化物酶用BeyoECL Star检测并用化学发光仪进行发光强度的定量检测时, 信噪比大于5。

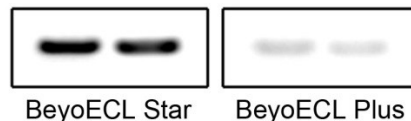


图1. BeyoECL Star和BeyoECL Plus的检测效果对比图。Western检测过程中仅发光试剂不同, 其余完全相同。

- BeyoECL Star的发光时间更长。在10微升1-10纳克/微升辣根过氧化物酶标记IgG中, 加入100微升碧云天的BeyoECL Star工作液后在不同时间点通过化学发光仪(luminometer)检测化学发光。检测数据显示20分钟后发光无明显减弱, 60分钟后发光强度减弱至初始发光强度的约85%左右, 120分钟后发光强度减弱至初始发光强度的约70%左右(参考图2)。

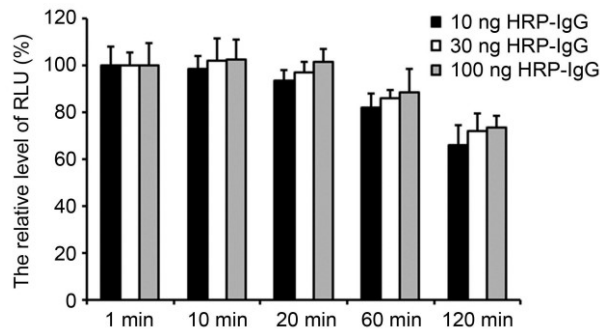


图2. BeyoECL Star检测不同剂量HRP-IgG, 20分钟后发光效果几乎不变, 120分钟后发光效果仍然良好。

- BeyoECL Star的高灵敏度可以大大节省宝贵的样品以及非常昂贵的一抗和二抗的用量。同时必须注意适当减少一抗和二抗或样品的用量, 以免获得过深的难以比较灰度的条带。
- BeyoECL Star非常稳定。BeyoECL Star和BeyoECL Plus一样, 37°C水浴孵育**30天**, 和4°C保存的试剂相比, 对同样品的检测效果无任何明显差异。
- BeyoECL Star的背景很低, 对PVDF膜和硝酸纤维素膜均适用。PVDF膜(FPP36/FPP39)和硝酸纤维素膜(FFN03)可以向碧云天订购。

包装清单:

产品编号	产品名称	包装
P0018AFT-1	BeyoECL Star A液	10ml
P0018AFT-2	BeyoECL Star B液	10ml

—	说明书	1份
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产品编号	产品名称	包装
P0018AS-1	BeyoECL Star A液	50ml
P0018AS-2	BeyoECL Star B液	50ml
—	说明书	1份

产品编号	产品名称	包装
P0018AM-1	BeyoECL Star A液	250ml
P0018AM-2	BeyoECL Star B液	250ml
—	说明书	1份

保存条件:

4°C避光保存, 一年有效。37°C避光保存, 一个月有效。如果长期不用, 可以-20°C避光保存。-20°C可以保存更长时间。

注意事项:

- BeyoECL Star A液和B液在吸取过程中必须要更换枪头, A液和B液相互污染后会导致A液或B液逐渐失效, 影响后续的使用效果。
- 各溶液使用后, 请盖紧瓶盖, 以防失效。特别是B液, 含有氧化剂, 比较容易被还原而失效。
- BeyoECL Star的荧光持续时间很长, 但开始反应后的20-30分钟内荧光更强一些, 随后荧光会逐渐减弱, 因此请注意充分利用这荧光较强的30分钟进行压片。
- 当发现BeyoECL Star的检测灵敏度过高而影响检测效果时, 可以选择检测灵敏度较低一些的BeyoECL Plus (P0018S/M), 或者减少样品、一抗或二抗的用量。如果BeyoECL Star的检测灵敏度仍然不够时, 可以选择检测灵敏度更高的BeyoECL Moon (P0018FS/M)。
- BeyoECL Star A液和B液均对人体有害, 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:

- Western实验步骤可以参考碧云天的相关网页: <http://www.beyotime.com/support/western.htm>。
- BeyoECL Star工作液的配制:** 等体积混合适量BeyoECL Star A液和B液, 室温放置备用。工作液宜在临检测前配制。
- Western二抗孵育后, 并进行数次洗涤后, 用WB专用镊子(FS035)将膜取出, 用吸水纸略吸去过多的液体(切勿接触膜的蛋白面), 然后置于一洁净保鲜膜上。
- 根据膜的大小, 按每10平方厘米膜加1ml BeyoECL Star工作液的比例, 滴加BeyoECL Star工作液到膜上, 确保使工作液均匀覆盖在膜上, 放置1-2分钟。
- 取膜, 弃BeyoECL Star工作液, 用吸水纸略吸去过多的液体。将膜放在两片保鲜膜中间, 随后进行压片检测或化学发光成像仪检测。
- 压片检测:** 将膜固定于片夹内。暗室内压片1分钟, 立即显影定影, 根据结果再调整压片时间。或直接分别压片30秒、1、3、5分钟, 然后一起显影定影观察结果。
- 化学发光成像仪检测:** 将膜放置到化学发光成像仪内, 参考仪器说明书进行检测。

相关产品:

产品编号	产品名称	包装
P0018S	BeyoECL Plus (超敏ECL化学发光试剂盒)	100ml
P0018M	BeyoECL Plus (超敏ECL化学发光试剂盒)	500ml
P0018AS	BeyoECL Star (特超敏ECL化学发光试剂盒)	100ml
P0018AM	BeyoECL Star (特超敏ECL化学发光试剂盒)	500ml
P0018FS	BeyoECL Moon (极超敏ECL化学发光试剂盒)	100ml
P0018FM	BeyoECL Moon (极超敏ECL化学发光试剂盒)	500ml
P0019	显影定影试剂盒	各1加仑
P0020	显影定影试剂盒	各1升

使用本产品的文献:

- Zhang F, Cao S, Zhu Z, Yang Y, Wen X, Chang YF, Huang X, Wu R, Wen Y, Yan Q, Huang Y, Ma X, Zhao Q. Immunoprotective Efficacy of Six In vivo-Induced Antigens against Actinobacillus pleuropneumoniae as Potential Vaccine Candidates in Murine Model. Front Microbiol. 2016 Oct 21;7:1623.
- Peng JY, Gao KX, Xin HY, Han P, Zhu GQ, Cao BY. Molecular cloning, expression analysis, and function of decorin in goat ovarian granulosa cells. Domest Anim Endocrinol. 2016 Oct;57:108-16.
- Zhou ZY, Huan LY, Zhao WR, Tang N, Jin Y, Tang JY. Spatholobi Caulis extracts promote angiogenesis in HUVECs in vitro and in zebrafish embryos in vivo via up-regulation of VEGFRs. J Ethnopharmacol. 2016 Oct 27. pii: S0378-8741(16)31527-6.

4. Li SJ, Sun SJ, Gao J, Sun FB. Wogonin induces Beclin-1/PI3K and reactive oxygen species-mediated autophagy in human pancreatic cancer cells. *Oncol Lett.* 2016 Dec;12(6):5059-5067.
5. Cao L, Li R, Chen X, Xue Y, Liu D. Neougonin A Inhibits Lipopolysaccharide-Induced Inflammatory Responses via Downregulation of the NF- κ B Signaling Pathway in RAW 264.7 Macrophages. *Inflammation.* 2016 Dec;39(6):1939-1948.
6. Xu P, Li Q, Jiang K, Yang Q, Bi M, Jiang C, Wang X, Wang C, Li L, Qiao C, Gong H, Xing Y, Ren J. BAC mediated transgenic Large White boars with FSH α / β genes from Chinese Erhualian pigs. *Transgenic Res.* 2016 Oct;25(5):693-709.
7. Li Y, Wang K, Yin S, Zheng H, Min D. Xanthohumol inhibits proliferation of laryngeal squamous cell carcinoma. *Oncol Lett.* 2016 Dec;12(6):5289-5294.
8. Hu H, Ma Y, Ye B, Wang Q, Yang T, Lv J, Shi J, Wu H, Xiang M. The role of Efr3a in age-related hearing loss. *Neuroscience.* 2017 Jan 26;341:1-8.
9. Luo H, Fan Z, Xiang D, Jiang Z, Zhang W, Gao L, Feng C. The protective effect of umbelliferone ameliorates myocardial injury following ischemia-reperfusion in the rat through suppression NLRP3 inflammasome and upregulating the PPAR- γ . *Mol Med Rep.* 2018 Feb;17(2):3404-3410.
10. Cao Z, Chen L, Liu Y, Peng T. Oxysophoridine rescues spinal cord injury via anti-inflammatory, anti-oxidative stress and anti-apoptosis effects. *Mol Med Rep.* 2018 Feb;17(2):2523-2528.
11. Xiao L, Xu J, Weng Q, Zhou L, Wang M, Liu M, Li Q. Mechanism of a Novel Camptothecin-Deoxycholic Acid Derivate Induced Apoptosis against Human Liver Cancer HepG2 Cells and Human Colon Cancer HCT116 Cells. *Recent Pat Anticancer Drug Discov.* 2019;14(4):370-382.
12. Chen H, Zhang Y, Ye S, Wu Q, Lin Y, Sheng K, Chen W, Lin X, Lin X. Chromatin remodelling factor BAF155 protects hepatitis B virus X protein (HBx) from ubiquitin-independent proteasomal degradation. *Emerg Microbes Infect.* 2019;8(1):1393-1405.
13. Wang S, Jiang T, Fan Y, Zhao S. A proteomic approach reveals the variation in human platelet protein composition after storage at different temperatures. *Platelets.* 2019;30(3):403-412.
14. Liang H, Mokrani A, Chisomo-Kasiya H, Ji K, Ge X, Ren M, Liu B, Xi B, Sun A. Dietary leucine affects glucose metabolism and lipogenesis involved in TOR/PI3K/Akt signaling pathway for juvenile blunt snout bream *Megalobrama amblycephala*. *Fish Physiol Biochem.* 2019 Apr;45(2):719-732.
15. Fei J, Gao L, Li HH, Yuan QL, Li LJ. Electroacupuncture promotes peripheral nerve regeneration after facial nerve crush injury and upregulates the expression of glial cell-derived neurotrophic factor. *Neural Regen Res.* 2019 Apr;14(4):673-682.
16. Li FJ, Zhang CL, Luo XJ, Peng J, Yang TL. Involvement of the MiR-181b-5p/HMGB1 Pathway in Ang II-induced Phenotypic Transformation of Smooth Muscle Cells in Hypertension. *Aging Dis.* 2019 Apr 1;10(2):231-248.
17. Li S, Sun Y, Han Z, Bu X, Yu W, Wang J. Cytoprotective effects of euxanthone against ox-LDL-induced endothelial cell injury is mediated via Nrf2. *Life Sci.* 2019 Apr 15;223:174-184.
18. Mu G, Li H, Tuo Y, Gao Y, Zhang Y. Antioxidative effect of *Lactobacillus plantarum* Y44 on 2,2'-azobis(2-methylpropanamide) dihydrochloride (ABAP)-damaged Caco-2 cells. *J Dairy Sci.* 2019 Aug;102(8):6863-6875.
19. Liu Y, Liu C, Zhang A, Yin S, Wang T, Wang Y, Wang M, Liu Y, Ying Q, Sun J, Wei F, Liu D, Wang C, Ge S. Down-regulation of long non-coding RNA MEG3 suppresses osteogenic differentiation of periodontal ligament stem cells (PDLSCs) through miR-27a-3p/IGF1 axis in periodontitis. *Aging (Albany NY).* 2019 Aug 9;11(15):5334-5350.
20. Luo J, Long Y, Ren G, Zhang Y, Chen J, Huang R, Yang L. Punicalagin Reversed the Hepatic Injury of Tetrachloromethane by Antioxidation and Enhancement of Autophagy. *J Med Food.* 2019 Dec;22(12):1271-1279.
21. Zhou Z, Li H, Tian S, Yi W, Zhou Y, Yang H, Li X, Wu B, Li X, Wu J, Wang Z, Hu S, Fang R. Critical roles of NLRP3 inflammasome in IL-1 β secretion induced by *Corynebacterium pseudotuberculosis* in vitro. *Mol Immunol.* 2019 Dec;116:11-17.
22. Zhou J, Xia L, Zhang Y. Naringin inhibits thyroid cancer cell proliferation and induces cell apoptosis through repressing PI3K/AKT pathway. *Pathol Res Pract.* 2019 Dec;215(12):152707.
23. Wang J, Liu J, Sun G, Meng H, Wang J, Guan Y, Yin Y, Zhao Z, Dong X, Yin S, Li H, Cheng Y, Wu H, Wu A, Yu X, Chen L. Glioblastoma extracellular vesicles induce the tumour-promoting transformation of neural stem cells. *Cancer Lett.* 2019 Dec 1;466:1-12.
24. Qian F, Zhang J, Hou K, Zhang Y, Wang Z, Luo P, Tuo Y. In vitro study of the antioxidative and antiproliferative capabilities of *Lactobacillus casei* 16-fermented soymilk. *Food Sci Nutr.* 2019 Dec 11;8(1):48-57.
25. Zhang C, Wang Y. Metformin attenuates cells stemness and epithelial-mesenchymal transition in colorectal cancer cells by inhibiting the Wnt3a/ β -catenin pathway. *Mol Med Rep.* 2019 Feb;19(2):1203-1209.
26. Xiu D, Wang D, Wang J, Ji F, Zhang W. MicroRNA-543 suppresses liver cancer growth and induces apoptosis via the JAK2/STAT3 signaling pathway. *Oncol Lett.* 2019 Feb;17(2):2451-2456.
27. Miao J, Huang Z, Liu S, Li X, Jia P, Guo Y, Wu N, Jia D. Hydroxytyrosol protects against myocardial ischemia reperfusion injury by inhibiting mitochondrial permeability transition pore opening. *Exp Ther Med.* 2019 Jan;17(1):671-678.
28. Yi J, Tang R, Yang J, Chen Y, Fei J. Streptolysin O derived from *Streptococcus pyogenes* inhibits RANKL-induced osteoclastogenesis through the NF- κ B signaling pathway. *Mol Med Rep.* 2019 Jan;19(1):414-422.
29. Zhang JY, Su XP, Li YN, Guo YH. MicroRNA-425-5p promotes the development of prostate cancer via targeting forkhead box J3. *Eur Rev Med Pharmacol Sci.* 2019 Jan;23(2):547-554.
30. Yan X, Yang C, Lin G, Chen Y, Miao S, Liu B, Zhao C. Antidiabetic Potential of Green Seaweed *Enteromorpha prolifera* Flavonoids Regulating Insulin Signaling Pathway and Gut Microbiota in Type 2 Diabetic Mice. *J Food Sci.* 2019 Jan;84(1):165-173.
31. Li D, Li X, Li G, Meng Y, Jin Y, Shang S, Li Y. Alpinumisoflavone causes DNA damage in Colorectal Cancer Cells via blocking DNA repair mediated by RAD51. *Life Sci.* 2019 Jan 1;216:259-270.
32. Xin H, Wang Z, Wu S, Wang P, Tao X, Xu C, You L. Calcified decellularized arterial scaffolds impact vascular smooth muscle cell transformation via downregulating α -SMA expression and upregulating OPN expression. *Exp Ther Med.* 2019 Jul;18(1):705-710.
33. Wen ZP, Zeng WJ, Chen YH, Li H, Wang JY, Cheng Q, Yu J, Zhou HH, Liu ZZ, Xiao J, Chen XP. Knockdown ATG4C inhibits gliomas progression and promotes temozolomide chemosensitivity by suppressing autophagic flux. *J Exp Clin Cancer Res.* 2019 Jul 10;38(1):298.
34. Liu H, Zhang H, Li M, Tian H, Tang X, Bai Y. Abnormal Expression of Fgf9 during the Development of the Anorectum in Rat Embryos with Anorectal Malformations. *Gastroenterol Res Pract.* 2019 Jul 11;2019:1986196.
35. Jiang M, Zhuang Y, Zu WC, Jiao L, Richard SA, Zhang S. Overexpression of EPAC2 reduces the invasion of glioma cells via MMP-2. *Oncol Lett.* 2019 Jun;17(6):5080-5086.
36. Fu S, Ni S, Wang D, Fu M, Hong T. Berberine suppresses mast cell-mediated allergic responses via regulating Fc ϵ RI-mediated and MAPK signaling. *Int Immunopharmacol.* 2019 Jun;71:1-6.
37. Wu M, Lin P, Li L, Chen D, Yang X, Xu L, Zhou B, Wang C, Zhang Y, Luo C, Ye C. Reduced asymmetric dimethylarginine accumulation through inhibition of the type I protein arginine methyltransferases promotes renal fibrosis in obstructed kidneys. *FASEB J.* 2019 Jun;33(6):6948-6956.
38. Chen H, Wu H, Yin H, Wang J, Dong H, Chen Q, Li Y. Effect of photobiomodulation on neural differentiation of human umbilical cord mesenchymal stem cells. *Lasers Med Sci.* 2019 Jun;34(4):667-675.
39. Chen Y, Zhao J, Duan Z, Gong T, Chen W, Wang S, Xu H. miR-27b-3p and miR-607 cooperatively regulate BLM gene expression by directly targeting the 3'-UTR in PC3 cells. *Mol Med Rep.* 2019 Jun;19(6):4819-4831.
40. Yang Q, Sun Z, Zhang M, Tran NT, Gong Y, Fan J, Lu Z, Zhou C, Zhang Y, Li S. Spp38 MAPK participates in maintaining the homeostasis of hemolymph microbiota in *Scylla paramamosain*. *Dev Comp Immunol.* 2019 Jun;95:38-49.
41. Wang H, Xu L, Yu M, Wang Y, Jiang T, Yang S, Lv Z. Glycosaminoglycan from *Apostichopus japonicus* induces immunomodulatory activity in cyclophosphamide-treated mice and in macrophages. *Int J Biol Macromol.* 2019 Jun 1;130:229-237.
42. Liu T, Zou XZ, Huang N, Ge XY, Yao MZ, Liu H, Zhang Z, Hu CP. miR-27a promotes endothelial-mesenchymal transition in hypoxia-induced pulmonary arterial hypertension by suppressing BMP signaling. *Life Sci.* 2019 Jun 15;227:64-73.
43. Islam MS, Miao L, Yu H, Han Z, Sun H. Ethanol Extract of *Illicium henryi* Attenuates LPS-Induced Acute Kidney Injury in Mice via Regulating

- Inflammation and Oxidative Stress. *Nutrients*. 2019 Jun 23;11(6). pii: E1412.
44. Wang C, Liu Y, Wang Y, Wei Z, Suo D, Ning G, Wu Q, Feng S, Wan C. Low-frequency pulsed electromagnetic field promotes functional recovery, reduces inflammation and oxidative stress, and enhances HSP70 expression following spinal cord injury. *Mol Med Rep*. 2019 Mar;19(3):1687-1693.
 45. Wu J, Zhu S, Wu Y, Jiang T, Wang L, Jiang J, Wen J, Deng Y. Multiple CH/ π Interactions Maintain the Binding of Aflatoxin B- in the Active Cavity of Human Cytochrome P450 1A2. *Toxins (Basel)*. 2019 Mar 12;11(3). pii: E158.
 46. Xu T, Chen H, Li J, Hong S, Shao L, Zheng X, Zou Q, Wang Y, Guo S, Jiang J. Implications for Cation Selectivity and Evolution by a Novel Cation Diffusion Facilitator Family Member From the Moderate Halophile *Planococcus dechangensis*. *Front Microbiol*. 2019 Mar 22;10:607.
 47. Pan W, Pang LJ, Cai HL, Wu Y, Zhang W, Fang JC. MiR-1294 acts as a tumor suppressor in clear cell renal cell carcinoma through targeting HOXA6. *Eur Rev Med Pharmacol Sci*. 2019 May;23(9):3719-3725.
 48. Wang S, Li J, Zhang C, Xu G, Tang Z, Zhang Z, Liu Y, Wang Z. Effects of aerobic exercise on the expressions and activities of nitric oxide synthases in the blood vessel endothelium in prediabetes mellitus. *Exp Ther Med*. 2019 May;17(5):4205-4212.
 49. Zhang Y, Wan J, Xu Z, Hua T, Sun Q. Exercise ameliorates insulin resistance via regulating TGF β -activated kinase 1 (TAK1)-mediated insulin signaling in liver of high-fat diet-induced obese rats. *J Cell Physiol*. 2019 May;234(5):7467-7474.
 50. Zhang C, Fan SJ, Sun AB, Liu ZZ, Liu L. Prenatal nicotine exposure induces depression-like behavior in adolescent female rats via modulating neurosteroid in the hippocampus. *Mol Med Rep*. 2019 May;19(5):4185-4194.
 51. Gu J, Xu T, Huang QH, Zhang CM, Chen HY. HMGB3 silence inhibits breast cancer cell proliferation and tumor growth by interacting with hypoxia-inducible factor 1 α . *Cancer Manag Res*. 2019 May 31;11:5075-5089.
 52. Liu T, Zou XZ, Huang N, Ge XY, Yao MZ, Liu H, Zhang Z, Hu CP. Down-regulation of miR-204 attenuates endothelial-mesenchymal transition by enhancing autophagy in hypoxia-induced pulmonary hypertension. *Eur J Pharmacol*. 2019 Nov 15;863:172673.
 53. He H, Dai J, Feng J, He Q, Chen X, Dai W, Xu A, Huang H. FBXO31 modulates activation of hepatic stellate cells and liver fibrogenesis by promoting ubiquitination of Smad7. *J Cell Biochem*. 2019 Nov 3;
 54. Pan Y, Wan X, Zeng F, Zhong R, Guo W, Lv XC, Zhao C, Liu B. Regulatory effect of *Grifola frondosa* extract rich in polysaccharides and organic acids on glycolipid metabolism and gut microbiota in rats. *Int J Biol Macromol*. 2019 Nov 8; pii: S0141-8130(19)37563-4.
 55. Liu Q, Wen J, Zhu J, Zhang T, Deng Y, Jiang J. Aromatic hydrocarbon receptor regulates chicken cytochrome P450 1A5 transcription: A novel insight into T-2 toxin-induced gene expression and cytotoxicity in LMH cells. *Biochem Pharmacol*. 2019 Oct;168:319-329.
 56. Li C, Chen W, Zheng L, Zhang B, Yang X, Zhang Q, Wang N, Wang Y, Yang J, Sha J, Zhou Z, Li X, Li Y, Shen XL. Ameliorative effect of ursolic acid on ochratoxin A-induced renal cytotoxicity mediated by Lonp1/Aco2/Hsp75. *Toxicol*. 2019 Oct;168:141-146.
 57. Wang J, Wang C, Xu N, Liu ZF, Pang DW, Zhang ZL. A virus-induced kidney disease model based on organ-on-a-chip: Pathogenesis exploration of virus-related renal dysfunctions. *Biomaterials*. 2019 Oct;219:119367.
 58. Islam MS, Yu H, Miao L, Liu Z, He Y, Sun H. Hepatoprotective Effect of the Ethanol Extract of *Illicium henryi* against Acute Liver Injury in Mice Induced by Lipopolysaccharide. *Antioxidants (Basel)*. 2019 Oct 1;8(10). pii: E446.
 59. Sun X, Liu H, Wang P, Wang L, Ni W, Yang Q, Wang H, Tang H, Zhao G, Zheng Z. Construction of a novel MK-4 biosynthetic pathway in *Pichia pastoris* through heterologous expression of HsUBIAD1. *Microb Cell Fact*. 2019 Oct 10;18(1):169.
 60. Wang G, Li Y, Li J, Zhang D, Luo C, Zhang B, Sun X. microRNA-199a-5p suppresses glioma progression by inhibiting MAGT1. *J Cell Biochem*. 2019 Sep;120(9):15248-15254.
 61. Sun XQ, Wu C, Qiu YB, Wu YX, Chen JL, Huang JF, Chen D, Pang QF. Heme oxygenase-1 attenuates seawater drowning-induced acute lung injury through a reduction in inflammation and oxidative stress. *Int Immunopharmacol*. 2019 Sep;74:105634.
 62. Li W, Xie X, Wu T, Lin H, Luo L, Yang H, Li J, Xin Y, Lin X, Chen Y. Loading Auristatin PE onto boron nitride nanotubes and their effects on the apoptosis of Hep G2 cells. *Colloids Surf B Biointerfaces*. 2019 Sep 1;181:305-314.
 63. Yan SM, Li H, Shu Q, Wu WJ, Luo XM, Lu L. LncRNA SNHG1 exerts a protective role in cardiomyocytes hypertrophy via targeting miR-15a-5p/HMGA1 axis. *Cell Biol Int*. 2020 Apr;44(4):1009-1019.
 64. Fu H, Qiu S, Yao X, Gao F, Tan P, Teng T, Shi B. Toxicity of glyphosate in feed for weanling piglets and the mechanism of glyphosate detoxification by the liver nuclear receptor CAR/PXR pathway. *J Hazard Mater*. 2020 Apr 5;387:121707.
 65. Li C, Zhan Y, Ma X, Fang H, Gai X. B7-H4 facilitates proliferation and metastasis of colorectal carcinoma cell through PI3K/Akt/mTOR signaling pathway. *Clin Exp Med*. 2020 Feb;20(1):79-86.
 66. Xi Z, Qiao Y, Wang J, Su H, Bao Z, Li H, Liao X, Zhong X. Gastrodin relieves inflammation injury induced by lipopolysaccharides in MRC-5 cells by up-regulation of miR-103. *J Cell Mol Med*. 2020 Jan;24(2):1451-1459.

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