

## QuickBlock™封闭液(TBSTw)

产品编号	产品名称	包装
P0231	QuickBlock™封闭液(TBSTw)	100ml

### 产品简介:

- 碧云天生产的QuickBlock™封闭液(QuickBlock™ Blocking Buffer)是最新一代的快速高效封闭液, 总体效果显著优于传统的基于BSA(牛血清白蛋白)、脱脂奶粉、酪蛋白(Casein)等的封闭液及国外同类产品, 可以用于Western blot (WB)、Immunofluorescence (IF)、Immunohistochemistry (IHC)、Immunocytochemistry (IC)等实验中的封闭、一抗或二抗的稀释。本产品配制在含有适当浓度Tween-20的TBS (TBSTw)中。
- QuickBlock™封闭液**快速高效**。封闭时间通常仅需5-15分钟, 并且和BSA、脱脂奶粉、酪蛋白等传统封闭液以及国外同类的快速封闭液相比, 显示出更强的信噪比(参考图1)。
- QuickBlock™封闭液封闭后**背景极低**。本封闭液不含血清和白蛋白, 确保极高的信噪比。
- QuickBlock™封闭液**兼容性好**, 兼容辣根过氧化物酶(Horseradish peroxidase, HRP)、碱性磷酸酶(Alkaline phosphatase, AP)和生物素标记的二抗。本产品中添加了不影响HRP和AP活性的防腐剂, 不会干扰HRP或AP标记二抗的检测。同时本产品不含生物素, 不会干扰基于生物素的检测。
- QuickBlock™封闭液**使用便捷**。本产品配制在TBSTw中, 可以直接用于封闭、一抗或二抗的稀释等相关实验。
- 本产品与BSA及国外同类产品的封闭效果对比参见图1。在相同样品和实验条件下, 仅封闭液及封闭时间存在如下图所示的差异时, 碧云天的QuickBlock™封闭液封闭后的整体背景明显低于BSA封闭后的背景, 而且目的条带亮度明显高于国外同类品牌产品。

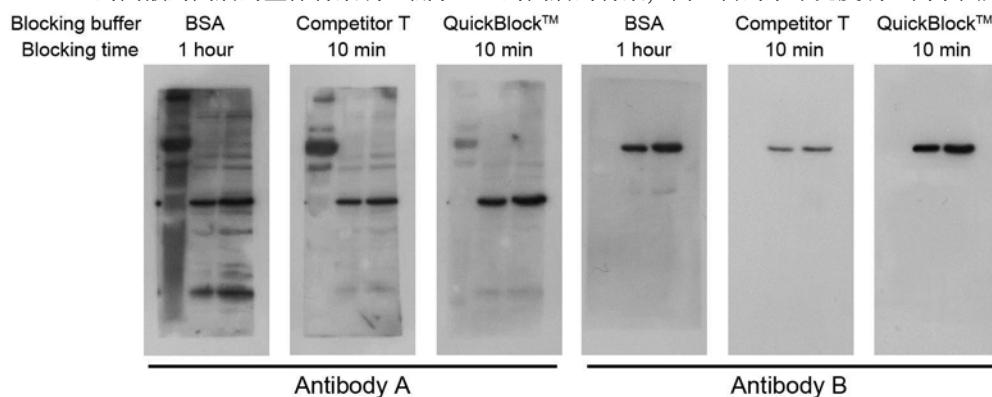


图1. QuickBlock™封闭液与BSA及国外同类产品的封闭效果比较。每组实验从左到右依次为: 5 $\mu$ l蛋白Marker, 2.5 $\mu$ g蛋白量的HeLa细胞裂解液, 5 $\mu$ g蛋白量的HeLa细胞裂解液。请注意对于Antibody A, QuickBlock™封闭液比BSA和国外同类产品具有更低的背景, 并且和国外同类产品相比信号明显更强。对于Antibody B, QuickBlock™封闭液比BSA具有更低的背景, 和国外同类产品相比信号明显更强。实际实验结果会因样品、抗体、实验条件等的不同而存在差异, 图中数据仅供参考。

- 关于不同封闭液的比较和选择, 请参考碧云天的相关网页: <http://www.beyotime.com/support/blocking-buffer.htm>。
- 按照每张膜封闭需要5-10ml QuickBlock™封闭液计算, 一个包装的本产品可以封闭10-20张膜。

### 包装清单:

产品编号	产品名称	包装
P0231	QuickBlock™封闭液(TBSTw)	100ml
—	说明书	1份

### 保存条件:

4°C保存, 一年有效。长期不使用可以-20°C保存。

### 注意事项:

- 本产品推荐仅使用一次, 重复使用可能会导致封闭效果下降。但对于一些信噪比很高的一抗, 例如一些内参抗体, 本封闭液可以重复使用2-3次。回收的封闭液请勿与未使用过的封闭液混合。
- 通常本产品用于PVDF膜及NC膜时的封闭时间为5-15分钟。对于一些背景非常高的抗体, 可以尝试将封闭时间延长为30-60分钟。此外, 如有特殊需要, 也完全可以4°C封闭过夜。

- 由于没有任何一种封闭液是适用于所有实验体系的，因此对于一些特殊的实验，可能需要根据具体情况考虑使用其它更合适的封闭液。
- 取放PVDF膜和NC膜应使用平头镊子，并仅轻轻夹取其边角，操作过程须避免膜表面产生划痕、折痕或压痕等痕迹。
- PVDF膜一经浸润和活化，需一直保持湿润，根据Western进行到的具体步骤可放置于western转膜液或洗涤液等适当溶液中，否则可能会产生难以封闭的异常背景。
- 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. Western Blot中膜的封闭

- 完成转膜后，用Western洗涤液洗涤蛋白膜1-2分钟。
- 根据膜的大小，在平皿或者其它适当容器中倒入一定体积的QuickBlock™封闭液(TBSTw)，确保封闭液后续能充分覆盖膜即可。对于常规的western，一张约6.6×8.5cm的膜推荐使用约10ml左右的封闭液。
- 用平头镊夹住膜的一角，将膜放置在QuickBlock™封闭液(TBSTw)中，使封闭液完全浸没膜，置于水平摇床上封闭约10分钟(通常5-15分钟均可；经多种抗体的测试封闭10分钟的效果很多时候会显著优于常规的BSA封闭1小时的效果)。
- 封闭后的膜即可用于一抗孵育等后续实验。详细的Western操作可以参考如下的相关网页：  
<http://www.beyotime.com/support/western.htm>。

### 2. IF、IHC等实验的封闭

按照相关实验步骤，直接用QuickBlock™封闭液(TBSTw)替换传统封闭液即可，一般封闭时间可以缩短至10分钟(在碧云天测试过的多个一抗中，封闭10-20分钟的效果无明显差别，封闭10分钟的效果等同于或显著优于常规的封闭方法)。

## 相关产品：

产品编号	产品名称	包装
P0220	Quickblock™封闭液(PBS)	100ml
P0222	Quickblock™封闭液(PBSTw)	100ml
P0226	Quickblock™封闭液(PBSTx)	100ml
P0228	Quickblock™封闭液(TBS)	100ml
P0231	Quickblock™封闭液(TBSTw)	100ml
P0233	Quickblock™封闭液(TBSTx)	100ml
P0235	Quickblock™封闭液(10X)	100ml
P0252	QuickBlock™ Western封闭液	100ml
P0256	QuickBlock™ Western一抗稀释液	100ml
P0258	QuickBlock™ Western二抗稀释液	100ml
P0260	QuickBlock™免疫染色封闭液	100ml
P0262	QuickBlock™免疫染色一抗稀释液	100ml
P0265	QuickBlock™免疫荧光染色二抗稀释液	100ml
P0267	QuickBlock™免疫组化染色二抗稀释液	100ml

## 使用本产品的文献：

- Zuo R, Wang Y, Li J, Wu J, Wang W, Li B, Sun C, Wang Z, Shi C, Zhou Y, Liu M, Zhang C. Rapamycin Induced Autophagy Inhibits Inflammation-Mediated Endplate Degeneration by Enhancing Nrf2/Keap1 Signaling of Cartilage Endplate Stem Cells. *Stem Cells* 2019 Jun
- Ye Tian, Xinxi Li, Chao Bai, Zhenwei Yang, Lei Zhang, Jun Luo. MiR-17-5p promotes the endothelialization of endothelial progenitor cells to facilitate the vascular repair of aneurysm by regulating PTEN-mediated PI3K/AKT/VEGFA pathway. *Cell Cycle* 2020 Dec;19(24):3608-3621.
- Di Xie, Xiaoli Ge, Yanli Ma, Jialong Tang, Yang Wang, Yajie Zhu, Chengjin Gao, Shuming Pan. Clemastine improves hypomyelination in rats with hypoxic-ischemic brain injury by reducing microglia-derived IL-1 $\beta$  via P38 signaling pathway. *J Neuroinflammation* 2020 Feb 15;17(1):57.
- Ying Zhang, Shaobo Wang, Yinghui Huang, Ke Yang, Yong Liu, Xianjin Bi, Chi Liu, Jiachuan Xiong, Bo Zhang, Jinghong Zhao, Ling Nie. Inhibition of CYP1B1 ameliorates cardiac hypertrophy induced by uremic toxin. *Mol Med Res* 2020 Jan;21(1):393-404.
- Jian-Hua Zhou, Zhi-Xian Yao, Zhong Zheng, Jun Yang, Rui Wang, Shi-Jie Fu, Xu-Feng Pan, Zhi-Hong Liu, Ke Wu. G-MDSCs-Derived Exosomal miRNA-143-3p Promotes Proliferation via Targeting of ITM2B in Lung Cancer. *Onco Targets Ther* 2020 Sep 30;13:9701-9719.
- Wei Wei, Xiaoguang Wei, Minyu Zhang, Cheng Peng. RETRACTED ARTICLE: Ultrasound microbubble-mediated miR-150-5p inhibits gastric cancer cell growth by targeting the expression of NR2F2. *J Recept Signal Transduct Res* 2021 Dec;41(6):II.
- Fang Qu, Yingshuang Song, Yaqin Wu, Yujie Huang, Qi Zhong, Yifan Zhang, Zhen Fan, Chun Xu. The protective role of Ephrin-B2/EphB4 signaling in osteogenic differentiation under inflammatory environment. *Exp Cell Res* 2021 Mar 15;400(2):112505.
- Zhihui Guan, Lingmin Zhou, Yu Zhang, Yu Zhang, Hongping Chen, Feifei Shao. Sulforaphane Ameliorates the Liver Injury of Traumatic Hemorrhagic Shock Rats. *J Surg Res* 2021 Nov;267:293-301.
- Shuang Shi, Qiang Tan, Jingjie Liang, Dingren Cao, Shaoyu Wang,

- Junyong Liang, Kaiyu Chen, Zhengguang Wang Placental trophoblast cell-derived exosomal microRNA-1290 promotes the interaction between endometrium and embryo by targeting LHX6 *Mol Ther Nucleic Acids* 2021 Sep 24;26:760-772.
10. Javad Harati, Xuelian Tao, Hosein Shahsavariani, Ping Du, Massimiliano Galluzzi, Kun Liu, Zhen Zhang, Peter Shaw, Mohammad Ali Shokrgozar, Haobo Pan, Peng-Yuan Wang Polydopamine-Mediated Protein Adsorption Alters the Epigenetic Status and Differentiation of Primary Human Adipose-Derived Stem Cells (hASCs) *Front Bioeng Biotechnol* 2022 Aug 10;10:934179.
  11. Ding-Jia-Cheng Jia, Qi-Wen Wang, Ying-Ying Hu, Jia-Min He, Qi-Wei Ge, Ya-Dong Qi, Lu-Yi Chen, Ying Zhang, Li-Na Fan, Yi-Feng Lin, Yong Sun, Yao Jiang, Lan Wang, Yan-Fei Fang, Hui-Qin He, Xiong-E Pi, Wei Liu, Shu-Jie Chen, Liang-Jing Wang *Lactobacillus johnsonii* alleviates colitis by TLR1/2-STAT3 mediated CD206+ macrophages IL-10 activation *Gut Microbes* 2022 Jan-Dec;14(1):2145843.
  12. Rui Zuo, Jiabin Liu, Yi Zhang, Haiyan Zhang, Jie Li, Junlong Wu, Yuelun Ji, Shichao Mao, Changqing Li, Yue Zhou, Yuzhang Wu, Daozhang Cai, Yongjian Sun, Chao Zhang In situ regeneration of bone-to-tendon structures: Comparisons between costal-cartilage derived stem cells and BMSCs in the rat model *Acta Biomater* 2022 Jun;145:62-76.
  13. Jiajun Chen, Jixin Qin, Jin Liu Elucidation of the mechanism of miR-122-5p in mediating FOXO3 injury and apoptosis of mouse cochlear hair cells induced by hydrogen peroxide *Exp Ther Med* 2022 Jun;23(6):435.
  14. Xuezhong Gao, Xiaodiao Kang, Hongwei Lu, Enxing Xue, Rong Chen, Jun Pan, Jianfeng Ma Piceatannol suppresses inflammation and promotes apoptosis in rheumatoid arthritis-fibroblast-like synoviocytes by inhibiting the NF- $\kappa$ B and MAPK signaling pathways *Mol Med Rep* 2022 May;25(5):180.
  15. Yu-Long Luo, Sheng Wang, Zhi-Xin Fang, Yi-Chu Nie, Li-Ting Zhang, Chu-Qin Huang, Li Long, Ke-Fang Lai STAT1 participates in the induction of substance P expression in airway epithelial cells by respiratory syncytial virus *Exp Lung Res* Feb-Mar 2021;47(2):78-86.
  16. Ding M1, 2, 3, Ning J2, Feng N2, Li Z2, Liu Z2, Wang Y2, Wang Y2, Li X3, Huo C3, Jia X3, Xu R3, Fu F2, Wang X3, Pei J2. Dynamin - related protein 1 - mediated mitochondrial fission contributes to post - traumatic cardiac dysfunction in rats and the protective effect of melatonin. *J Pineal Res* 2018 Jan;64(1). doi: 10.1111/jpi.12447.
  17. Zhao Z1, Zhao Y1, Zhuang XY2, Lo WC3, Baker MAB4, Lo CJ5, Bai F6. Frequent pauses in Escherichia coli flagella elongation revealed by single cell real-time fluorescence imaging. *Nature Communications* 2018 May 14;9(1):1885.
  18. Pei-Pei Zhao, Hao-Ran Hu, Jia-Yu Liu, Qin-Fei Ke, Xiao-Yuan Peng, Hao Ding, Ya-Ping Guo. Gadolinium phosphate/chitosan scaffolds promote new bone regeneration via Smad/Runx2 pathway. *CHEM ENG J* 2019 March 1;359: 1120-1129.
  19. Long J1, 2, Xiao Y3, Liu L4, Cao Y5, 6. The adverse vascular effects of multi-walled carbon nanotubes (MWCNTs) to human vein endothelial cells (HUVECs) in vitro: role of length of MWCNTs. *J NANOBIOTECHNOL* 2017 Nov 10;15(1):80.
  20. Hu H1, Zhao P2, Liu J2, Ke Q2, Zhang C1, Guo Y3, Ding H4. Lanthanum phosphate/chitosan scaffolds enhance cytocompatibility and osteogenic efficiency via the Wnt/ $\beta$ -catenin pathway. *J NANOBIOTECHNOL* 2018 Nov 29;16(1):98.
  21. Chen GL1, 2, Ye T1, Chen HL3, Zhao ZY4, Tang WQ4, Wang LS3, Xia JL1, 4. Xanthine dehydrogenase downregulation promotes TGF $\beta$  signaling and cancer stem cell-related gene expression in hepatocellular carcinoma. *Oncogenesis* 2017 Sep 25;6(9):e382.
  22. Chen GL, Ye T, Chen HL, Zhao ZY, Tang WQ, Wang LS, Xia JL. Xanthine dehydrogenase downregulation promotes TGF $\beta$  signaling and cancer stem cell-related gene expression in hepatocellular carcinoma. *Oncogenesis* 2017 Sep 25;6(9):e382.
  23. Fu C, Yin D, Nie H, Sun D. Notoginsenoside R1 Protects HUVEC Against Oxidized Low Density Lipoprotein (Ox-LDL)-Induced Atherogenic Response via Down-Regulating miR-132. *CELL PHYSIOL BIOCHEM* 2018;51(4):1739-1750.
  24. Tengfei Liu, Xiaoyan Liu, Hui Xiong, Cheng Xu, Jianxu Yao, Xiumei Zhu, Jianping Zhou and Jing Yao. Mechanisms of TPGS and its derivatives inhibiting P-glycoprotein efflux pump and application for reversing multidrug resistance in hepatocellular carcinoma. *POLYM CHEM-UK* 2018;9:1827-1839.
  25. Yang HW1, Liu XY2, Shen ZF1, Yao W1, Gong XB2, Huang HX3, Ding GH1. An investigation of the distribution and location of mast cells affected by the stiffness of substrates as a mechanical niche. *Int J Biol Sci* 2018 Jun 22;14(9):1142-1152.
  26. Yao Y, Huang Y, Qian D, Zhang S, Chen Y, Bai B. Effect of Various Ratios of Co-Cultured ATDC5 Cells and Chondrocytes on the Expression of Cartilaginous Phenotype in Microcavitary Alginate Hydrogel. *J Cell Biochem* 2017 Nov;118(11):3607-3615.
  27. Jin X1, Yu Y1, Zou Q2, Wang M1, Cui Y1, Xie J1, Wang Z1. MicroRNA - 105 promotes epithelial - mesenchymal transition of nonsmall lung cancer cells through upregulating Mcl - 1. *J Cell Biochem* 2018 Oct 14. doi: 10.1002/jcb.27873.
  28. Peng W, Liu YJ, Hu MB, Yan D, Gao YX, Wu CJ. Using the "target constituent removal combined with bioactivity assay" strategy to investigate the optimum arecoline content in charred areca nut. *SCI REP-UK* 2017 Jan 5;7:40278.
  29. Ding Y1, Zheng Y1, Liu T1, Chen T1, Wang C1, Sun Q1, Hua M2, Hua T3. Changes in GABAergic markers accompany degradation of neuronal function in the primary visual cortex of senescent rats. *SCI REP-UK* 2017 Nov 2;7(1):14897.
  30. Guo D1, Hu X2, Zhang H3, Lu C4, Cui G5, Luo X6. Orientin and neuropathic pain in rats with spinal nerve ligation. *Int Immunopharmacol* 2018 May;58:72-79.
  31. Li XH1, Wang HP1, Tan J1, Wu YD1, Yang M1, Mao CZ2, Gao SF2, Li H2, Chen H3, Cai WB4. Loss of pigment epithelium-derived factor leads to ovarian oxidative damage accompanied by diminished ovarian reserve in mice. *Life Sci* 2019 Jan 1;216:129-139.
  32. Liu L1, Zhang Y1, Chang X1, Li R2, Wu C1, Tang L3, Zhou Z4. Fluoro-chloridone perturbs blood-testis barrier/Sertoli cell barrier function through Arp3-mediated F-actin disruption. *Toxicol Lett* 2018 Oct 1;295:277-287.
  33. Wu K1, Mu XY2, Jiang JT2, Tan MY2, Wang RJ2, Zhou WJ3, Wang X2, He YY4, Li MQ5, Liu ZH2. miRNA-26a-5p and miR-26b-5p inhibit the proliferation of bladder cancer cells by regulating PDCD10. *Oncol Rep* 2018 Dec;40(6):3523-3532.
  34. Zhang W1, Chen W1, Li Z1, Ma L1, Yu J1, Wang H1, Liu Z1, Xu B1. Identification and Characterization of Three New Cytochrome P450 Genes and the Use of RNA Interference to Evaluate Their Roles in Antioxidant Defense in *Apis cerana cerana* Fabricius. *Front Physiol* 2018 Nov 15;9:1608.
  35. Gao S1, Wang Y2, Li D1, Guo Y1, Zhu M3, Xu S1, Mao J1, Fan G4. Tanshinone IIA Alleviates Inflammatory Response and Directs Macrophage Polarization in Lipopolysaccharide-Stimulated RAW264.7 Cells. *Inflammation* 2018 Sep 14. doi: 10.1007/s10753-018-0891-7.

36. Yang D1, Sun C1, Zhang J2, Lin S2, Zhao L2, Wang L1, Lin R1, Lv J1, Xin S1. Proliferation of vascular smooth muscle cells under inflammation is regulated by NF- $\kappa$ B p65/microRNA-17/RB pathway activation. *Int J Mol Med* 2018 Jan;41(1):43-50.
37. Sun H1, Shao W2, Liu H2, Jiang Z3. Exposure to 2,4-dichlorophenoxyacetic acid induced PPAR $\beta$ -dependent disruption of glucose metabolism in HepG2 cells. *ENVIRON SCI POLLUT R* 2018 Jun;25(17):17050-17057.
38. Lin L1, Wang L1, Liu Y1, Xu C1, Tu Y2, Zhou J1. Non-thermal plasma inhibits tumor growth and proliferation and enhances the sensitivity to radiation in vitro and in vivo. *Oncology Reports Oncol Rep*. 2018 Dec;40(6):3405-3415.
39. Liang X, Li B, Huang Q, Liu D, Ma H. Klotho prevents DEX-induced apoptosis in MC3T3-E1 osteoblasts through the NF- $\kappa$ B signaling pathway. *BIOCHEM BIOPH RES CO* 2018 Dec 9;507(1-4):355-361.
40. Liu L1, Chang X1, Zhang Y1, Wu C1, Li R2, Tang L3, Zhou Z4. Fluorochloridone induces primary cultured Sertoli cells apoptosis: Involvement of ROS and intracellular calcium ions-mediated ERK1/2 activation. *Toxicol In Vitro* 2018 Mar;47:228-237.
41. Wu JX1, Tong L1, Hu L1, Xia CM1, 2, Li M1, Chen QH3, Chen FX1, Du DS4. Upregulation of Nav1.6 expression in the rostral ventrolateral medulla of stress-induced hypertensive rats. *Hypertens Res* 2018 Dec;41(12):1013-1022.
42. Liu B, Li X, Liu F, Li F, Wei S, Liu J, Lv Y. Expression and Significance of TRIM 28 in Squamous Carcinoma of Esophagus. *Pathol Oncol Res* 2018 Nov 27.
43. Chen J, Mao S, Li H, Zheng M, Yi L, Lin JM, Lin ZX. The pathological structure of the perivascular niche in different microvascular patterns of glioblastoma. *PLoS One* 2017 Aug 3;12(8):e0182183.
44. Chen J1, 2, Mao S2, Li H2, Zheng M1, Yi L2, Lin JM2, Lin ZX3. The pathological structure of the perivascular niche in different microvascular patterns of glioblastoma. *PLoS One* 2017 Aug 3;12(8):e0182183.
45. Song Z1, Yang F1, Du H1, Li X1, Liu J1, Dong M1, Xu X2, 3. Role of artemin in non - small cell lung cancer. *Thorac Cancer* 2018 May;9(5):555-562.
46. Liu X1, Wang Z2, Zhang G3, Zhu Q3, Zeng H3, Wang T3, Gao F3, Qi Z3, Zhang J4, Wang R3. Overexpression of asparaginyl endopeptidase is significant for esophageal carcinoma metastasis and predicts poor patient prognosis. *Oncol Lett* 2018 Jan;15(1):1229-1235.
47. Liu X, Wang Z, Zhang G, Zhu Q, Zeng H, Wang T, Gao F, Qi Z, Zhang J, Wang R. Overexpression of asparaginyl endopeptidase is significant for esophageal carcinoma metastasis and predicts poor patient prognosis. *Oncol Lett* 2018 Jan;15(1):1229-1235.
48. Liang Y, Niu H, Ma L, Du D, Wen L, Xia Q, Huang W. Eriodictyol 7 O  $\beta$  D glucopyranoside from *Coreopsis tinctoria* Nutt. ameliorates lipid disorders via protecting mitochondrial function and suppressing lipogenesis. *Mol Med Rep* 2017 Aug;16(2):1298-1306.
49. Li L, Zhao R, Li Y, Wang WH. Antitumor activity of 2 [(2E) 3,7 dimethyl 2,6 octadienyl] 6 methyl 2,5 cyclohexadiene 1,4 dione isolated from the aerial part of *Atractylodes macrocephala* in hepatocellular carcinoma. *Mol Med Rep* 2017 Nov;16(5):6299-6305.
50. Li D, Ji H, Zhao B, Xu C, Xia W, Han L, Yu D, Ju Y, Jin C. Therapeutic effect of ulinastatin on pulmonary fibrosis via downregulation of TGF  $\beta$ 1, TNF  $\alpha$  and NF  $\kappa$ B. *Mol Med Rep* 2018 Jan;17(1):1717-1723.
51. Zhang L1, Liu J1, Zhou F1, Wang W1, Chen N1. PGC-1 $\alpha$  ameliorates kidney fibrosis in mice with diabetic kidney disease through an antioxidative mechanism. *Mol Med Rep* 2018 Mar;17(3):4490-4498.
52. Chen G1, Li Q1, Luo Y2, Liu T2, Zhou S1, Pan E3, Peng L3. Effect of Notoginsenoside R1 on autologous adipose graft in rats. *MOL MED REP* 2018 Apr;17(4):5928-5933.
53. Xu H1, Chen J1, Si X1, Chen M1, Pei F1, Qiu C1, Wu J1, Guan X1. PKR inhibition mediates endotoxin tolerance in macrophages through inactivation of PI3K/AKT signaling. *Mol Med Rep* 2018 Jun;17(6):8548-8556.
54. Wang Z1, Zhou W1, Dong H1, Ma X1, He Z1. Dexmedetomidine pretreatment inhibits cerebral ischemia/reperfusion-induced neuroinflammation via activation of AMPK. *Mol Med Rep* 2018 Oct;18(4):3957-3964.
55. Shi GH1, Zhou L2. Emodin suppresses angiogenesis and metastasis in anaplastic thyroid cancer by affecting TRAF6-mediated pathways in vivo and in vitro. *Mol Med Rep* 2018 Dec;18(6):5191-5197.
56. Cheng L1, Zhang D2, Chen B. Tumor necrosis factor  $\alpha$ -induced protein-3 protects zinc transporter 8 against proinflammatory cytokine-induced downregulation. *Exp Ther Med* 2016 Sep;12(3):1509-1514.
57. Zhai L, Li Y, Lan X, Ai L. MicroRNA-10a-5p suppresses cancer proliferation and division in human cervical cancer by targeting BDNF. *Exp Ther Med* 2017 Dec;14(6):6147-6151.
58. Wang X1, Zou P1, He Y1, Meng K1, Quan F2, Zhang Y3. Effect of luteinizing hormone on goat theca cell apoptosis and steroidogenesis through activation of the PI3K/AKT pathway. *Anim Reprod Sci* 2018 Mar;190:108-118.
59. Ding Y1, 2, Chen T1, Wang Q1, Yuan Y1, Hua T1. Axon initial segment plasticity accompanies enhanced excitation of visual cortical neurons in aged rats. *Neuroreport* 2018 Dec 12;29(18):1537-1543.

Version 2024.03.12