



碧云天生物技术/Beyotime Biotechnology
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DAPI 染色液

产品编号	产品名称	包装
C1006	DAPI染色液	50ml

产品简介：

- DAPI染色液(DAPI Staining Solution)是经过精心优化几乎适用于所有常见细胞和组织细胞核染色的染色液。
- DAPI，即2-(4-Amidinophenyl)-6-indolecarbamide dihydrochloride，也称DAPI dihydrochloride，分子式为 $C_{16}H_{15}N_5 \cdot 2HCl$ ，分子量为350.25，CAS Number 28718-90-3。
- DAPI是一种可以穿透细胞膜的蓝色荧光染料。和双链DNA结合后可以产生比DAPI自身强20多倍的荧光。和EB(ethidium bromide)相比，对双链DNA的染色灵敏度要高很多倍。
- DAPI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。DAPI也常用于普通的细胞核染色以及某些特定情况下的双链DNA染色。
- DAPI的最大激发波长为340nm，最大发射波长为488nm；DAPI和双链DNA结合后，最大激发波长为364nm，最大发射波长为454nm。
- 本DAPI染色液可以直接用于固定细胞或组织的细胞核染色。

包装清单：

产品编号	产品名称	包装
C1006	DAPI 染色液	50ml
—	说明书	1份

保存条件：

-20℃避光保存，一年有效。

注意事项：

- 本DAPI染色液的浓度经过碧云天的优化，确保可以满足各种常规染色的需要。如需使用特定浓度的DAPI，请选购碧云天的DAPI (C1002)。
- 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。
- DAPI对人体有刺激性，操作时请小心，并注意适当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，染色完毕后再按后续步骤进行DAPI染色。如果不需要进行其它染色，则直接进行后续的DAPI染色。
2. 对于贴壁细胞或组织切片，加入少量DAPI染色液，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。
3. 室温放置3-5分钟。
4. 吸除DAPI染色液，用TBST、PBS或生理盐水洗涤2-3次，每次3-5分钟。
5. 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：

- Zhou H, Qian J, Wang J, Yao W, Liu C, Chen J, Cao X. Enhanced bioactivity of bone morphogenetic protein-2 with low dose of 2-N, 6-O-sulfated chitosan in vitro and in vivo. *Biomaterials*. 2009 Mar;30(9):1715-24.
- Gong Y, Wu J, Huang Y, Shen S, Han X. Nonylphenol induces apoptosis in rat testicular Sertoli cells via endoplasmic reticulum stress. *Toxicol Lett*. 2009 Apr 25;186(2):84-95.
- Dong HS, Li L, Song ZH, Tang J, Xu B, Zhai XW, Sun LL, Zhang P, Li ZB, Pan QJ, Shi QH, Shen W. Premeiotic fetal murine germ cells cultured in vitro form typical oocyte-like cells but do not progress through meiosis. *Theriogenology*. 2009 Jul 15;72(2):219-31.
- Chen K, Zhang Q, Wang J, Liu F, Mi M, Xu H, Chen F, Zeng K. Taurine protects transformed rat retinal ganglion cells from hypoxia-induced apoptosis by preventing mitochondrial dysfunction. *Brain Res*. 2009 Jul 7;1279:131-8.
- Xin HY, Cheng AC, Wang MS, Jia RY, Shen CJ, Chang H. Identification and characterization of a duck enteritis virus US3-like gene. *Avian Dis*. 2009 Sep;53(3):363-9.
- Ding W, Ju S, Jiang S, Zhu L, Wang Y, Wang H. Reduced APRIL expression induces cellular senescence via a HSPG-dependent pathway. *Pathol Oncol Res*. 2009 Dec;15(4):693-701.
- Xie W, Cheng A, Wang M, Chang H, Zhu D, Luo Q. Molecular cloning and characterization of the UL31 gene from duck enteritis virus. *Mol Biol Rep*. 2010 Mar;37(3):1495-503.
- Xu H, Wang P, Fu Y, Zheng Y, Tang Q, Si L, You J, Zhang Z, Zhu Y, Zhou L, Wei Z, Lin B, Hu L, Kong X. Length of the ORF, position of the first AUG and the Kozak motif are important factors in potential dual-coding transcripts. *Cell Res*. 2010 Apr;20(4):445-57.
- Zhang Y, Zhou L, Bao YL, Wu Y, Yu CL, Huang YX, Sun Y, Zheng LH, Li YX. Butyrate induces cell apoptosis through activation of JNK MAP kinase pathway in human colon cancer RKO cells. *Chem Biol Interact*. 2010 May 14;185(3):174-81.
- Feng LX, Jing CJ, Tang KL, Tao L, Cao ZW, Wu WY, Guan SH, Jiang BH, Yang M, Liu X, Guo DA. Clarifying the signal network of salvianolic acid B using proteomic assay and bioinformatic analysis. *Proteomics*. 2011 Apr;11(8):1473-85.
- Kang H, Fan Y, Deng X. Vascular smooth muscle cell glycocalyx modulates shear-induced proliferation, migration, and NO production responses. *Am J Physiol Heart Circ Physiol*. 2011 Jan;300(1):H76-83.
- Liu L, Song LN, Yang GL, Zhao SF, He FM. Fabrication, characterization, and biological assessment of multilayer DNA coatings on sandblasted-dual acid etched titanium surface. *J Biomed Mater Res A*. 2011 Jun 1;97(3):300-10.
- Zheng Y, Ren PP, Wang JL, Wang YF. Wolbachia-induced cytoplasmic incompatibility is associated with decreased Hira expression in male *Drosophila*. *PLoS One*. 2011 Apr 29;6(4):e19512.
- Li H, Ma G, Gui D, Zhao S, Wang P, He K, Wang X, Ruan J, Cao J, Yang S, Li K. Characterization of the porcine p65 subunit of NF- κ B and its association with virus antibody levels. *Mol Immunol*. 2011 Mar;48(6-7):914-23.
- Xiang P, Li M, Zhang CY, Chen DL, Zhou ZH. Cytocompatibility of electrospun nanofiber tubular scaffolds for small diameter tissue engineering blood vessels. *Int J Biol Macromol*. 2011 Oct 1;49(3):281-8.
- Gao Y, Su Y, Qu L, Xu S, Meng L, Cai SQ, Shou C. Mitochondrial apoptosis contributes to the anti-cancer effect of *Smilax glabra* Roxb. *Toxicol Lett*. 2011 Nov 30;207(2):112-20.
- Yang XZ, Dou S, Sun TM, Mao CQ, Wang HX, Wang J. Systemic delivery of siRNA with cationic lipid assisted PEG-PLA nanoparticles for cancer therapy. *J Control Release*. 2011 Dec 10;156(2):203-11.
- Zhao J, Yu H, Lin L, Tu J, Cai L, Chen Y, Zhong F, Lin C, He F, Yang P. Interactome study suggests multiple cellular functions of hepatoma-derived growth factor (HDGF). *J Proteomics*. 2011 Dec 21;75(2):588-602.
- Li Y, Sun WG, Liu HK, Qi GY, Wang Q, Sun XR, Chen BQ, Liu JR. γ -Tocotrienol inhibits angiogenesis of human umbilical vein endothelial cell induced by cancer cell. *J Nutr Biochem*. 2011 Dec;22(12):1127-36.
- Zhao ZK, Li W, Wang MY, Zhou L, Wang JL, Wang YF. The role of HIRA and maternal histones in sperm nucleus decondensation in the gibel carp and color crucian carp. *Mol Reprod Dev*. 2011 Feb;78(2):139-47.
- Ge S, Wang G, Shen Y, Zhang Q, Jia D, Wang H, Dong Q, Yin T. Cytotoxic effects of MgO nanoparticles on human umbilical vein endothelial cells in vitro. *IET Nanobiotechnol*. 2011 Jun;5(2):36.
- An Y, Zhou Y, Ren G, Tian Q, Lu Y, Li H, Li K, Su T, Xu B, Chen S, Wang T, Zhang X, Nie Y, Wang X, Zhao Q. Elevated expression of MGB2-Ag/TRAK1 is correlated with poor prognosis in patients with colorectal cancer. *Int J Colorectal Dis*. 2011 Nov;26(11):1397-404.
- Duan YL, Wang SY, Zeng QW, Su DS, Li W, Wang XR, Zhao Z. Astroglial reaction to delta opioid peptide [D-Ala2, D-Leu5] enkephalin confers neuroprotection against global ischemia in the adult rat hippocampus. *Neuroscience*. 2011 Sep 29;192:81-90.
- Hu X, Chen Z, Mao X, Tang S. Effects of phenytoin and Echinacea purpurea extract on proliferation and apoptosis of mouse embryonic palatal mesenchymal cells. *J Cell Biochem*. 2011 May;112(5):1311-7.
- Jiang F, Liu T, He Y, Yan Q, Chen X, Wang H, Wan X. MiR-125b promotes proliferation and migration of type II endometrial carcinoma cells through targeting TP53INP1 tumor suppressor in vitro and in vivo. *BMC Cancer*. 2011 Oct 5;11:425.
- Li X, Chen D, Le C, Zhu C, Gan Y, Hovgaard L, Yang M. Novel mucus-penetrating liposomes as a potential oral drug delivery system: preparation, in vitro characterization, and enhanced cellular uptake. *Int J Nanomedicine*. 2011;6:3151-62.
- Mao CQ, Du JZ, Sun TM, Yao YD, Zhang PZ, Song EW, Wang J. A biodegradable amphiphilic and cationic triblock copolymer for the delivery of siRNA targeting the acid ceramidase gene for cancer therapy. *Biomaterials*. 2011 Apr;32(11):3124-33.
- Wang Y, Xu H, Liu X, Liu L, Liang Z. Inhibition of fibroblast differentiation of muscle-derived stem cells in cell implantation treatment of stress urinary incontinence. *Cell Reprogram*. 2011 Oct;13(5):459-64.
- Yan P, Li T, Bo M, Die L, Xing L. Inhibition of bone resorption by econazole in rat osteoclast-like cells through suppressing TRPV5. *Arch Pharm Res*. 2011 Jun;34(6):1007-13.
- Li C, Zheng Y, Wang X, Xia W, Gao H, Li D, Ma X. Bone marrow-derived stem cells contribute skin regeneration in skin and soft tissue expansion. *J Cell Physiol*. 2011 Nov;226(11):2834-40.
- Cheng J, Wang J, Chen B, Xia G, Cai X, Liu R, Ren Y, Bao W, Wang X. A promising strategy for overcoming MDR in tumor by magnetic iron oxide nanoparticles co-loaded with daunorubicin and 5-bromotetrandrin. *Int J Nanomedicine*. 2011;6:2123-31.
- Lin WM, Karsten U, Goletz S, Cheng RC, Cao Y. Expression of CD176 (Thomsen-Friedenreich antigen) on lung, breast and liver cancer-initiating cells. *Int J Exp Pathol*. 2011 Apr;92(2):97-105.
- Shen L, Xu W, Li A, Ye J, Zhou J. JWA enhances As₂O₃-induced tubulin polymerization and apoptosis via p38 in HeLa and MCF-7 cells. *Apoptosis*. 2011 Nov;16(11):1177-93.
- Zhang SJ, Ye F, Xie RF, Hu F, Wang BF, Wan F, Guo DS, Lei T. Comparative study on the stem cell phenotypes of C6 cells under different culture conditions. *Chin Med J (Engl)*. 2011 Oct;124(19):3118-26.
- Shi Y, Bao YL, Wu Y, Yu CL, Huang YX, Sun Y, Zheng LH, Li YX.

- Alantolactone inhibits cell proliferation by interrupting the interaction between Cripto-1 and activin receptor type II A in activin signaling pathway. *J Biomol Screen*. 2011 Jun;16(5):525-35.
36. Zhang C, Wu X, Zhao Y, Deng Z, Qian G. SIGIRR inhibits toll-like receptor 4, 5, 9-mediated immune responses in human airway epithelial cells. *Mol Biol Rep*. 2011 Jan;38(1):601-9.
 37. Qiu J, Wang G, Hu J, Peng Q, Zheng Y. Id1-induced inhibition of p53 facilitates endothelial cell migration and tube formation by regulating the expression of beta1-integrin. *Mol Cell Biochem*. 2011 Nov;357(1-2):125-33.
 38. Wang J, Chen B, Cheng J, Cai X, Xia G, Liu R, Wang X. Apoptotic mechanism of human leukemia K562/A02 cells induced by magnetic iron oxidenanoparticles co-loaded with daunorubicin and 5-bromotetrandrin. *Int J Nanomedicine*. 2011;6:1027-34.
 39. Huo SJ, Li Y, Raisman G, Yin ZQ. Transplanted olfactory ensheathing cells reduce the gliotic injury response of Müller cells in a rat model of retinitis pigmentosa. *Brain Res*. 2011 Mar 25;1382:238-44.
 40. Lin F, Wang X, Jie Z, Hong X, Li X, Wang M, Yu Y. Inhibitory effects of miR-146b-5p on cell migration and invasion of pancreatic cancer by targeting MMP16. *J Huazhong Univ Sci Technolog Med Sci*. 2011 Aug;31(4):509-14.
 41. Gan Q, Dai D, Yuan Y, Qian J, Sha S, Shi J, Liu C. Effect of size on the cellular endocytosis and controlled release of mesoporous silica nanoparticles for intracellular delivery. *Biomed Microdevices*. 2012 Apr;14(2):259-70.
 42. Ma L, Song B, Jin H, Pi J, Liu L, Jiang J, Cai J. Cinobufacini induced MDA-MB-231 cell apoptosis-associated cell cycle arrest and cytoskeleton function. *Bioorg Med Chem Lett*. 2012 Feb 1;22(3):1459-63.
 43. Lu X, Zhang N, Dong S, Hu Y. Involvement of GPR12 in the induction of neurite outgrowth in PC12 cells. *Brain Res Bull*. 2012 Jan 4;87(1):30-6.
 44. Yin QQ, Dong CF, Dong SQ, Dong XL, Hong Y, Hou XY, Luo DZ, Pei JJ, Liu XP. AGEs Induce Cell Death via Oxidative and Endoplasmic Reticulum Stresses in Both Human SH-SY5Y Neuroblastoma Cells and Rat Cortical Neurons. *Cell Mol Neurobiol*. 2012 Nov;32(8):1299-309.
 45. Wang SB, Shi Q, Xu Y, Xie WL, Zhang J, Tian C, Guo Y, Wang K, Zhang BY, Chen C, Gao C, Dong XP. Protein Disulfide Isomerase Regulates Endoplasmic Reticulum Stress and the Apoptotic Process during Prion Infection and PrP Mutant-Induced Cytotoxicity. *PLoS One*. 2012;7(6):e38221.
 46. Cai B, Li J, Wang J, Luo X, Ai J, Liu Y, Wang N, Liang H, Zhang M, Chen N, Wang G, Xing S, Zhou X, Yang B, Wang X, Lu Y. microRNA-124 Regulates Cardiomyocyte Differentiation of Bone Marrow-Derived Mesenchymal Stem Cells via Targeting STAT3 Signaling. *Stem Cells*. 2012 Aug;30(8):1746-55.
 47. Li S, Yu S, Zhang C, Shu H, Liu S, An N, Yang M, Yin Q, Yang H. Increased expression of matrix metalloproteinase 9 in cortical lesions from patients with focal cortical dysplasia type IIb and tuberous sclerosis complex. *Brain Res*. 2012 May 9;1453:46-55.
 48. Cheng W, Liu T, Wan X, Gao Y, Wang H. MicroRNA-199a targets CD44 to suppress the tumorigenicity and multidrug resistance of ovarian cancer-initiating cells. *FEBS J*. 2012 Jun;279(11):2047-59.
 49. Li Q, Yan Z, Li F, Lu W, Wang J, Guo C. The improving effects on hepatic fibrosis of interferon- γ liposomes targeted to hepatic stellate cells. *Nanotechnology*. 2012 Jun 15;23(26):265101.
 50. Shen X, Wang C, Zhu Q, Li T, Yu L, Zheng W, Fei C, Qiu M, Xue F. Effect of the diclazuril on Hsp90 in the second-generation merozoites of *Eimeria tenella*. *Vet Parasitol*. 2012 Apr 30;185(2-4):290-5.
 51. Wu Y, He Z, Zhang L, Jiang H, Zhang W. Ontogeny of immunoreactive Lh and Fsh cells in relation to early ovarian differentiation and development in protogynous hermaphroditic ricefield Eel *Monopterus albus*. *Biol Reprod*. 2012 Mar 30;86(3):93.
 52. Ding W, Liu Y. Retraction: Genistein protects genioglossus myocyte against hypoxia-induced injury through PI3K-Akt and ERK MAPK pathways. *J Cell Biochem*. 2012 May;113(5):1809.
 53. Zhang C, Wang ZJ, Lok KH, Yin M. β -amyloid42 induces desensitization of CXCR4 chemokine receptor-4 via formyl peptide receptor in neural stem/progenitor cells. *Biol Pharm Bull*. 2012;35(2):131-8.
 54. Li F, Li QH, Wang JY, Zhan CY, Xie C, Lu WY. Effects of interferon- γ liposomes targeted to platelet-derived growth factor receptor-beta on hepatic fibrosis in rats. *J Control Release*. 2012 Apr 30;159(2):261-70.
 55. Li H, Gao F, Ma L, Jiang J, Miao J, Jiang M, Fan Y, Wang L, Wu D, Liu B, Wang W, Lui VC, Yuan Z. Therapeutic potential of in utero mesenchymal stem cell (MSCs) transplantation in rat fetuses with spina bifida aperta. *J Cell Mol Med*. 2012 Jul;16(7):1606-17.
 56. Qu KX, He ZX, Nie WH, Zhang JC, Jin XD, Yang GR, Yuan XP, Huang BZ, Zhang YP, Zan LS. Karyotype analysis of mithun (*Bos frontalis*) and mithun bull x Brahman cow hybrids. *Genet Mol Res*. 2012 Jan 19;11(1):131-40.
 57. Liu J, Zhao Y, Guo Q, Wang Z, Wang H, Yang Y, Huang Y. TAT-modified nanosilver for combating multidrug-resistant cancer. *Biomaterials*. 2012 Sep;33(26):6155-61.
 58. Jiao J, Wang H, Jin S, Fan E, Li Y, Han D, Zhang L. A comparative study of mouse nasal septal and turbinal epithelium for in vitro cell cultures. *Int Forum Allergy Rhinol*. 2012 May;2(3):241-7.
 59. Ren J, Shen S, Wang D, Xi Z, Guo L, Pang Z, Qian Y, Sun X, Jiang X. The targeted delivery of anticancer drugs to brain glioma by PEGylated oxidized multi-walled carbon nanotubes modified with angiopep-2. *Biomaterials*. 2012 Apr;33(11):3324-33.
 60. Ding M, Zhang E, He R, Wang X, Li R, Wang W, Yi Q. The radiation dose-regulated AND gate genetic circuit, a novel targeted and real-time monitoring strategy for cancer gene therapy. *Cancer Gene Ther*. 2012 Jun;19(6):382-92.
 61. Zhao Y, Ding X, Ye X, Dai ZM, Yang JS, Yang WJ. Involvement of cyclin K posttranscriptional regulation in the formation of *Artemia* diapause cysts. *PLoS One*. 2012;7(2):e32129.
 62. Zhou BH, Shen XJ, Wang HW, Li T, Xue FQ. Receptor for activated C kinase ortholog of second-generation merozoite in *Eimeria tenella*: clone, characterization, and diclazuril-induced mRNA expression. *Parasitol Res*. 2012 Oct;111(4):1447-55.
 63. Du Z, Yang Y, Hu Y, Sun Y, Zhang S, Peng W, Zhong Y, Huang X, Kong W. A long-term high-fat diet increases oxidative stress, mitochondrial damage and apoptosis in the inner ear of D-galactose-induced aging rats. *Hear Res*. 2012 May;287(1-2):15-24.
 64. Wang L, Zhang H, Chen B, Xia G, Wang S, Cheng J, Shao Z, Gao C, Bao W, Tian L, Ren Y, Xu P, Cai X, Liu R, Wang X. Effect of magnetic nanoparticles on apoptosis and cell cycle induced by wogonin in Raji cells. *Int J Nanomedicine*. 2012;7:789-98.
 65. Yu Y, Liu M, Zhang L, Cao Q, Zhang P, Jiang H, Zou Y, Ge J. Heat shock transcription factor 1 inhibits H₂O₂-induced cardiomyocyte death through suppression of high-mobility group box 1. *Mol Cell Biochem*. 2012 May;364(1-2):263-9.
 66. Chang H, Zhang C, Cao Y. Expression and distribution of symplekin regulates the assembly and function of the epithelial tight junction. *Histochem Cell Biol*. 2012 Mar;137(3):319-27.
 67. Wu J, Huang GT, He W, Wang P, Tong Z, Jia Q, Dong L, Niu Z, Ni L. Basic fibroblast growth factor enhances stemness of human stem cells from the apical papilla. *J Endod*. 2012 May;38(5):614-22.
 68. Sheng C, Chen H, Wang B, Liu T, Hong Y, Shao J, He X, Ma Y, Nie H, Liu N, Xia W, Ying W. NAD(+) administration significantly attenuates synchrotron radiation X-ray-induced DNA damage and structural alterations of rodent testes. *Int J Physiol Pathophysiol Pharmacol*. 2012;4(1):1-9.
 69. Huang Q, Deng J, Xie Z, Wang F, Chen S, Lei B, Liao P, Huang N, Wang Z, Wang Z, Cheng Y. Effective Gene Transfer into Central Nervous System Following Ultrasound-Microbubbles-Induced Opening of the Blood-Brain Barrier. *Ultrasound Med Biol*. 2012 Jul;38(7):1234-43.
 70. Meng X, Li F, Chen S, Tang C, Zhang W, Wang Z, Zhao S. Cloning and expression of neuron-specific enolase in the corpus luteum of dairy goats. *Gene*. 2012 Jul 25;503(2):222-8.
 71. Chen LF, FitzGibbon T, He JR, Yin ZQ. Localization and developmental expression patterns of CSPG-cs56 (aggrecan) in normal and dystrophic retinas in two rat strains. *Exp Neurol*. 2012 Apr;234(2):488-98.
 72. Li C, Wang L, Huang K, Zheng L. Endoplasmic reticulum stress in retinal vascular degeneration: protective role of resveratrol. *Invest Ophthalmol Vis Sci*. 2012 May 31;53(6):3241-9.
 73. Huo SJ, Li YC, Xie J, Li Y, Raisman G, Zeng YX, He JR, Weng CH, Yin ZQ. Transplanted olfactory ensheathing cells reduce retinal degeneration in royal college of surgeons rats. *Curr Eye Res*. 2012 Aug;37(8):749-58.
 74. Lu X, Zhang N, Meng B, Dong S, Hu Y. Involvement of GPR12 in the regulation of cell proliferation and survival. *Mol Cell Biochem*. 2012 Jul;366(1-2):101-10.
 75. Xue H, Zhou L, Yuan P, Wang Z, Ni J, Yao T, Wang J, Huang Y, Yu C, Lu L. Counteraction between angiotensin II and angiotensin-(1-7) via activating angiotensin type I and Mas receptor on rat renal mesangial

- cells. *Regul Pept.* 2012 Aug 20;177(1-3):12-20.
76. Zhang W, Huang Q, Hua Z. Galangin and TRAIL cooperate to suppress A549 lung cancer proliferation via apoptosis and p38 MAPK activation. *Acta Pharmaceutica Sinica B.* 2012 Dec;2(6):569-74.
 77. Liu GL, Wang KY, Guo H, Zhao SJ, Shen Y, Zhao YB. Inositol-requiring protein 1 α signaling pathway is activated in the temporal cortex of patients with mesial temporal lobe epilepsy. *Neurol Sci.* 2013 Mar;34(3):357-64.
 78. Li W, Zhang Q, Wang M, Wu H, Mao F, Zhang B, Ji R, Gao S, Sun Z, Zhu W, Qian H, Chen Y, Xu W. Macrophages are involved in the protective role of human umbilical cord-derived stromal cells in renal ischemia-reperfusion injury. *Stem Cell Res.* 2013 May;10(3):405-16.
 79. Hu X, Li H, Luo S, Liu T, Jiang Y, Liu S. Thiol and pH dual-responsive dynamic covalent shell cross-linked micelles for triggered release of chemotherapeutic drugs. *Polym. Chem.* 2013 Sep;3:695-706.
 80. Wu YS, Lu HL, Huang X, Liu DH, Meng XM, Guo X, Kim YC, Xu WX. Diabetes-induced loss of gastric ICC accompanied by up-regulation of natriuretic peptide signaling pathways in STZ-induced diabetic mice. *Peptides.* 2013 Feb;40:104-11.
 81. Yang F, Sun X, Shen J, Yu LP, Liang JY, Zheng HQ, Wu ZD. A recombinant protein (rSj16) derived from *Schistosoma japonicum* induces cell cycle arrest and apoptosis of murine myeloid leukemia cells. *Parasitol Res.* 2013 Mar;112(3):1261-72.
 82. Xie Q, Xinyong G, Xianjin C, Yayu W. PEI/DNA formation affects transient gene expression in suspension Chinese hamster ovary cells via a one-step transfection process. *Cytotechnology.* 2013 Mar;65(2):263-71.
 83. Liu L, Wang P, Liu X, He D, Liang C, Yu Y. Exogenous NAD⁺ supplementation protects H9c2 cardiac myoblasts against hypoxia/reoxygenation injury via Sirt1-p53 pathway. *Fundam Clin Pharmacol.* 2014 Apr;28(2):180-9.
 84. Li H, Zhang X, Zeng S, Chen L, Li X, Lin C, Zhang M, Shu S, Xie S, He Y, Yang L, Tang S, Fu X. The cellular localization of Na⁺/H⁺ exchanger 1, cystic fibrosis transmembrane conductance regulator, potassium channel, epithelial sodium channel γ and vacuolar-type H⁺-ATPase in human eccrine sweat glands. *Acta Histochem.* 2014 Oct;116(8):1237-43.
 85. Su J, Hu G, Wang Y, Liang D, Gao M, Sun H, Zhang Y. Recombinant human growth differentiation factor-9 improves oocyte reprogramming competence and subsequent development of bovine cloned embryos. *Cell Reprogram.* 2014 Aug;16(4):281-9.
 86. Fu Y, Zhang P, Ge J, Cheng J, Dong W, Yuan H, Du Y, Yang M, Sun R, Jiang H. Histone deacetylase 8 suppresses osteogenic differentiation of bone marrow stromal cells by inhibiting histone H3K9 acetylation and RUNX2 activity. *Int J Biochem Cell Biol.* 2014 Sep;54:68-77.
 87. Chen Z, Zhu M, Pan X, Zhu Y, Yan H, Jiang T, Shen Y, Dong X, Zheng N, Lu J, Ying S, Shen Y. Inhibition of Hepatitis B virus replication by SAMHD1. *Biochem Biophys Res Commun.* 2014 Aug 8;450(4):1462-8.
 88. Li D, Zhu B, Ding L, Lu W, Xu G, Wu J. Role of the mitochondrial pathway in serum deprivation-induced apoptosis of rat endothelial cells. *Biochem Biophys Res Commun.* 2014 Sep 26;452(3):354-60.
 89. Lan R, Zhang Y, Xiang J, Zhang W, Wang GH, Li WW, Xu LL, Cai DF. Xiao-Xu-Ming decoction preserves mitochondrial integrity and reduces apoptosis after focal cerebral ischemia and reperfusion via the mitochondrial p53 pathway. *J Ethnopharmacol.* 2014;151(1):307-16.
 90. Song HY, Tian YM, Zhang YM, Zhou L, Lian H, Zhu JX. A novel finding of anoctamin 5 expression in the rodent gastrointestinal tract. *Biochem Biophys Res Commun.* 2014 Aug 22;451(2):258-62.
 91. Zhang X, Jiang H, Gong Q, Fan C, Huang Y, Ling J. Expression of high mobility group box 1 in inflamed dental pulp and its chemotactic effect on dental pulp cells. *Biochem Biophys Res Commun.* 2014 Aug 8;450(4):1547-52.
 92. Wang A, Wang J, Ren H, Yang F, Sun L, Diao K, Zhao Z, Song M, Cui Z, Wang E, Wei M, Mi X. TRAF4 participates in Wnt/ β -catenin signaling in breast cancer by upregulating β -catenin and mediating its translocation to the nucleus. *Mol Cell Biochem.* 2014 Oct;395(1-2):211-9.
 93. Wang GH, Lan R, Zhen XD, Zhang W, Xiang J, Cai DF. An-Gong-Niu-Huang Wan protects against cerebral ischemia induced apoptosis in rats: up-regulation of Bcl-2 and down-regulation of Bax and caspase-3. *J Ethnopharmacol.* 2014 May 28;154(1):156-62.
 94. Wang J, An Y, Li F, Li D, Jing D, Guo T, Luo E, Ma C. The effects of pulsed electromagnetic field on the functions of osteoblasts on implant surfaces with different topographies. *Acta Biomater.* 2014 Feb;10(2):975-85.
 95. Du Z, Yang Q, Liu L, Li S, Zhao J, Hu J, Liu C, Qian D, Gao C. NADPH oxidase 2-dependent oxidative stress, mitochondrial damage and apoptosis in the ventral cochlear nucleus of D-galactose-induced aging rats. *Neuroscience.* 2015 Feb 12;286:281-92.
 96. Zhou L, Zhou W, Zhang S, Liu B, Liang P, Zhou Y, Zhou T, Zhang K, Leng Y, Kong W. BDNF signaling in the rat cerebello-vestibular pathway during vestibular compensation: BDNF signaling in vestibular compensation. *FEBS J.* 2015 Sep;282(18):3579-91.
 97. Lu Z, Lu F, Zheng Y, Zeng Y, Zou C, Liu X. Grape seed proanthocyanidin extract protects human umbilical vein endothelial cells from indoxyl sulfate-induced injury via ameliorating mitochondrial dysfunction. *Ren Fail.* 2015 Oct 29:1-9.
 98. Sheng Y, Sun B, Xie X, Li N, Dong D. DMH1 (4-[6-(4-isopropoxyphenyl)pyrazolo[5-a]pyrimidin-3-yl]quinoline) inhibits chemotherapeutic drug-induced autophagy. *Acta Pharm Sin B.* 2015 Jul;5(4):330-6.
 99. Zhang W, Qiao L, Wang X, Senthikumar R, Wang F, Chen B. Inducing cell cycle arrest and apoptosis by dimercaptosuccinic acid modified Fe₃O₄ magnetic nanoparticles combined with nontoxic concentration of bortezomib and gambogic acid in RPMI-8226 cells. *Int J Nanomedicine.* 2015 Apr 30;10:3275-89.
 100. Sun HY, Hu YJ, Zhao XY, Zhong Y, Zeng LL, Chen XB, Yuan J, Wu J, Sun Y, Kong W, Kong WJ. Age-related changes in mitochondrial antioxidant enzyme Trx2 and TXNIP-Trx2-ASK1 signal pathways in the auditory cortex of a mimetic aging rat model: changes to Trx2 in the auditory cortex. *FEBS J.* 2015 Jul;282(14):2758-74.
 101. Du Z, Li S, Liu L, Yang Q, Zhang H, Gao C. NADPH oxidase 3-associated oxidative stress and caspase 3-dependent apoptosis in the cochlea of D-galactose-induced aged rats. *Mol Med Rep.* 2016 Jan;13(1):1056.
 102. Ye Y, Li X, Zhang Y, Shen Z, Yang J. Androgen Modulates Functions of Endothelial Progenitor Cells through Activated Egr1 Signaling. *Stem Cells Int.* 2016;2016:7057894.
 103. Zhao J, Yang L, Huang P, Wang Z, Tan Y, Liu H, Pan J, He CY, Chen ZY. Synthesis and characterization of low molecular weight polyethyleneimine-terminated Poly(β -amino ester) for highly efficient gene delivery of minicircle DNA. *J Colloid Interface Sci.* 2016 Feb 1;463:93-8.
 104. Wang S, Cao W, Xing H, Chen YL, Li Q, Shen T, Jiang C, Zhu D. Activation of ERK pathway is required for 15-HETE-induced angiogenesis in human umbilical vascular endothelial cells. *J Recept Signal Transduct Res.* 2016;36(3):225-32.
 105. Jin H, Ji M, Chen L, Liu Q, Che S, Xu M, Lin Z. The clinicopathological significance of Mortalin overexpression in invasive ductal carcinoma of breast. *J Exp Clin Cancer Res.* 2016 Mar 9;35:42.
 106. Li Z, Liu Q, Piao J, Hua F, Wang J, Jin G, Lin Z, Zhang Y. Clinicopathological implications of Tiam1 overexpression in invasive ductal carcinoma of the breast. *BMC Cancer.* 2016 Aug 25;16(1):681.
 107. Tian X, Peng J, Zhong J, Yang M, Pang J, Lou J, Li M, An R, Zhang Q, Xu L, Dong Z. β -Caryophyllene protects in vitro neurovascular unit against oxygen-glucose deprivation and re-oxygenation-induced injury. *J Neurochem.* 2016 Dec;139(5):757-768.
 108. Li H, Cui X, Chen D, Yang Y, Piao J, Lin Z, Yan G, Shen D. Clinical implication of Tiam1 overexpression in the prognosis of patients with serous ovarian carcinoma. *Oncol Lett.* 2016 Nov;12(5):3492-3498.
 109. Xie W, Chen X, Miao G, Tang J, Fu X. Regulation of cellular behaviors of fibroblasts related to wound healing by sol-gel derived bioactive glass particles. *J Biomed Mater Res A.* 2016 Oct;104(10):2420-9.
 110. Sun J, Bi F, Yang Y, Zhang Y, Jin A, Li J, Lin Z. DEK protein overexpression predicts poor prognosis in pancreatic ductal adenocarcinoma. *Oncol Rep.* 2017 Feb;37(2):857-864.

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