碧云天网站 微信公众号

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RIPA裂解液(弱)

产品编号	产品名称	包装
P0013D	RIPA裂解液(弱)	100ml

产品简介:

- 碧云天生产的RIPA裂解液(RIPA Lysis Buffer)是一种传统的细胞组织快速裂解液。RIPA裂解液裂解得到的蛋白样品可以用于常规的PAGE、Western、免疫沉淀(immunol precipitation，IP)、免疫共沉淀(co-IP)和ELISA等。
- 本产品可以用于动物、植物的细胞或组织样品，也可以用于真菌或细菌样品。
- RIPA的本意是Radio Immunoprecipitation Assay。RIPA裂解液的配方有很多种，根据其裂解液的强度大致可以分为强、中、弱三类。关于不同的RIPA裂解液以及碧云天生产的其它裂解液的主要特点和差异，以及如何选择裂解液可参考我们的相关网页: http://www.beyotime.com/support/lysis-buffer.htm 。
- RIPA裂解液(弱)的主要成分为50mM Tris (pH7.4)，150mM NaCl，1% NP-40，0.25% sodium deoxycholate，以及sodium orthovanadate，sodium fluoride，EDTA，leupeptin等多种抑制剂。可以有效抑制蛋白降解。
- 用RIPA裂解液裂解得到的蛋白样品，可以用碧云天生产的BCA蛋白浓度测定试剂盒(P0009/P0010/P0010S/P0011/P0012/P0012S)测定蛋白浓度。由于含有较高浓度的去垢剂，不能用Bradford法测定由本裂解液裂解得到样品的蛋白浓度。

包装清单:

产品编号	产品名称	包装
P0013D	RIPA裂解液(弱)	100ml
—	说明书	1份

保存条件:

-20°C保存，一年有效。

注意事项:

- 为取得最佳的使用效果，尽量避免过多的反复冻融。可以适当分装后使用。
- 需自备PMSF。PMSF(ST506)可以向碧云天订购。也可以选购总体效果更佳的碧云天生产的P1045/P1046 蛋白酶磷酸酶抑制剂混合物(通用型, 50X)，或者根据具体用途选择P1048/P1049 蛋白酶磷酸酶抑制剂混合物(通用型, 质谱兼容, 50X)、P1050/P1051蛋白酶磷酸酶抑制剂混合物(哺乳动物样品抽提用，50X)、P1055/P1056 蛋白酶磷酸酶抑制剂混合物(植物样品抽提用，50X)、P1060/P1061 蛋白酶磷酸酶抑制剂混合物(真菌或酵母抽提用，50X)、P1065/P1066 蛋白酶磷酸酶抑制剂混合物(细菌抽提用，50X)。如果无需检测磷酸化蛋白，也可以选不含磷酸酶抑制剂的蛋白酶抑制剂化合物。
- 裂解样品的所有步骤都需在冰上或4°C进行。
- 关于裂解液的选择，一方面可以参考我们的相关网页: http://www.beyotime.com/support/lysis-buffer.htm选择合适的裂解液；另一方面也需要通过一些预实验来摸索最佳的适合您实验条件的裂解液。
- 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. 对于培养细胞样品:

a. 融解 RIPA 裂解液，混匀。取适当量的裂解液，在使用前数分钟内加入 PMSF，使 PMSF 的最终浓度为 1mM，或者根据实验需要加入适当的上述蛋白酶磷酸酶抑制剂混合物。

b. **对于贴壁细胞:** 去除培养液，用 PBS、生理盐水或无血清培养液洗一遍(如果血清中的蛋白没有干扰，可以不洗)。按照 6 孔板每孔加入 150-250 微升裂解液的比例加入裂解液。用枪吹打数下，使裂解液和细胞充分接触。通常裂解液接触动物细胞 1-2 秒后，细胞就会被裂解。植物细胞宜在冰上裂解 2-10min。

对于悬浮细胞: 离心收集细胞，轻轻vortex或者弹击管底以把细胞尽量分散开。按照6孔板每孔细胞加入150-250微升裂解液的比例加入裂解液。轻弹管底以充分裂解细胞。充分裂解后应没有明显的细胞沉淀。如果细胞量较多，必需分装成50-100万细胞/管，然后再裂解。

对于细菌或酵母: 对于1ml菌液或酵母液，离心去上清，如果有必要可以使用PBS洗涤一次，充分去除液体后，轻轻vortex或者弹击管底以把细菌或酵母尽量弹散。加入100-200微升裂解液，轻轻vortex或者弹击管底以混匀，冰上裂解2-10min。如果希望获得更好的裂解效果，细菌和酵母可以分别使用溶菌酶和破壁酶(Lyticase)消化，然后再使用本裂解液进行裂解。

裂解液用量说明：通常6孔板每孔细胞或者1ml的菌液或酵母液中的细菌和酵母量加入150微升裂解液已经足够，但如果细胞密度非常高可以适当加大裂解液的用量到200微升或250微升。每100万动物细胞用100微升本产品裂解后获得的上清，其蛋白浓度约为2-4mg/ml，不同细胞有所不同。

c. 充分裂解后，10000-14000g 离心 3-5 分钟，取上清，即可进行后续的 PAGE、Western、免疫沉淀和免疫共沉淀等操作。

2. 对于组织样品：

a. 把组织剪切成细小的碎片。

b. 融解 RIPA 裂解液，混匀。取适当量的裂解液，在使用前数分钟内加入 PMSF，使 PMSF 的最终浓度为 1mM，或者根据实验需要加入适当的上述蛋白酶磷酸酶抑制剂混合物。

c. 按照每 20 毫克组织加入 150-250 微升裂解液的比例加入裂解液。(如果裂解不充分可以适当添加更多的裂解液，如果需要高浓度的蛋白样品，可以适当减少裂解液的用量。)

d. 用玻璃匀浆器匀浆，或使用碧云天生产的 E6600 TissueMaster™手持式组织研磨仪研磨，直至充分裂解。也可以把组织样品冷冻后液氮研磨，研磨充分后加入裂解液进行裂解。

e. 充分裂解后，10000-14000g 离心 3-5 分钟，取上清，即可进行后续的 PAGE、Western、免疫沉淀和免疫共沉淀等操作。每 20mg 冻存的小鼠肝脏组织用 200 微升本裂解液裂解后获得的上清，其蛋白浓度约为 15-25mg/ml，不同状态的不同组织有所不同。

f. 如果组织样品本身非常细小，可以适当剪切后直接加入裂解液裂解，通过强烈 vortex 使样品裂解充分。然后同样离心取上清，用于后续实验。直接裂解的优点是比较方便，不必使用匀浆器或研磨设备，缺点是不如匀浆或研磨那样裂解得比较充分。

注：RIPA裂解液的裂解产物中经常会出现一小团透明胶状物，属正常现象。该透明胶状物为含有基因组DNA等的复合物。在不检测和基因组DNA结合特别紧密的蛋白的情况下，可以直接离心取上清用于后续实验；如果需要检测和基因组结合特别紧密的蛋白，则可以通过超声处理打碎打散该透明胶状物，随后离心取上清用于后续实验。如果检测一些常见的转录因子，例如NF-kappaB、p53等时，通常不必进行超声处理，就可以检测到这些转录因子。

附录：碧云天生产的各种裂解液主要特点、差异和选择

首先请参考下表，了解各种裂解液的主要特点和差异。

产品编号	P0013	P0013B	P0013C	P0013D	P0013F	P0013G	P0013J	P0013K
产品名称	Western及IP细胞裂解液	RIPA裂解液(强)	RIPA裂解液(中)	RIPA裂解液(弱)	NP-40裂解液	SDS裂解液	Western及IP细胞裂解液(无抑制剂)	RIPA裂解液(强，无抑制剂)
有效裂解成分	1% Triton X-100	1% Triton X-100, 1% deoxycholate, 0.1% SDS	1% NP-40, 0.5% deoxycholate, 0.1% SDS	1% NP-40, 0.25% deoxycholate	1% NP-40	1% SDS	1% Triton X-100	1% Triton X-100, 1% deoxycholate, 0.1% SDS
裂解强度	温和	强	中	温和	温和	强	温和	强
对膜蛋白的提取	一般	很好	较好	一般	一般	很好	一般	很好
对胞浆蛋白的提取	很好	很好	很好	很好	很好	很好	很好	很好
对核蛋白的提取	较好	很好	较好	较好	较好	很好	较好	很好
胞浆磷酸化蛋白提取	很好	很好	很好	很好	很好	很好	很好	很好
细胞核转录因子提取	很好	很好	很好	很好	很好	很好	很好	很好
含蛋白酶抑制剂	是	是	是	是	是	是	否	否
含磷酸酯酶抑制剂	是	是	是	是	是	是	否	否
不同物种样品兼容性	高	高	高	高	高	高	高	高
主要用途	WB, IP, co-IP	WB, IP	WB, IP	WB, IP, co-IP	WB, IP, co-IP	WB, ChIP	WB, IP, co-IP	WB, IP

- 用于普通的Western、IP或co-IP，我们推荐使用Western及IP细胞裂解液(P0013)，该裂解液已被国内各大研究机构广泛使用，发表大量SCI论文，用户普遍反映很好。裂解细胞或组织后，没有非常粘滞的透明状DNA团块形成，不必采用超声处理等就可以非常理想地用于后续操作。另外该裂解液裂解的产物也适合用于磷酸化蛋白的Western检测。
- 对于某些特殊蛋白的IP，如果发现Western及IP细胞裂解液 (P0013)效果不是非常理想，可以尝试用RIPA裂解液(强、中或弱)或NP-40裂解液。如果发现IP的时候背景很高，即非特异的蛋白也被IP下来，则需要选用裂解强度较高的裂解液，例如RIPA裂解液(强或中)。如果发现目的蛋白无法被IP下来，则说明裂解液的强度过强，可以使用较为温和的裂解液例如RIPA裂解液(弱)或NP-40裂解液。
- 对于某些难溶解蛋白的Western，如果发现Western及IP细胞裂解液 (P0013)效果不是非常理想，可以尝试使用裂解强度更高的裂解液例如RIPA裂解液(强、中)或SDS裂解液。使用RIPA裂解液(强)的用户也非常多，发表了大量SCI论文。
- 用于特定用途需要自行添加特定抑制剂或不需要添加抑制剂时，可以考虑选购P0013J或P0013K。P0013J在很多时候可以兼容酶活性和生物小分子的检测，对于特定的酶或生物小分子的检测是否兼容需要自行测试，碧云天不提供具体的应用信息。P0013J的裂解能力比P0013K弱一些，但用于酶活性和生物小分子时，P0013J的兼容性通常会更好一些。

使用本产品的文献：

1. Zhang XT, Song TB, Du BL, Li DM, Li XM. Caspase-3 antisense oligodeoxynucleotides inhibit apoptosis in gamma-irradiated human leukemia HL-60 cells. Apoptosis 2007 Apr;12(4):743-51.
2. Deng XQ, Chen LL, Li NX. The expression of SIRT1 in nonalcoholic fatty liver disease induced by high-fat diet in rats. Liver Int 2007 Jun;27(5):708-15.
3. Shen Y, Yang X, Dong N, Xie X, Bai X, Shi Y. Generation and selection of immunized Fab phage display library against human B cell lymphoma. Cell Res 2007 Jul;17(7):650-60.
4. Wei Y, Weng D, Li F, Zou X, Young DO, Ji J, Shen P. Involvement of JNK regulation in oxidative stress-mediated murine liver injury by microcystin-LR. Apoptosis 2008 Aug;13(8):1031-42.
5. Qin ZX, Zhu HY, Hu YH. Effects of lysophosphatidylcholine on beta-amyloid-induced neuronal apoptosis. Acta Pharmacol Sin 2009 Apr;30(4):388-95.
6. Chen Y, Zhang H, Gou X, Horikawa Y, Xing J, Chen Z. Upregulation of HAb18G/CD147 in activated human umbilical vein endothelial cells enhances the angiogenesis. Cancer Lett 2009 Jun 8;278(1):113-21.
7. Zhang DL, Chen YQ, Jiang X, Ji TT, Mei B. Oxidative damage increased in presenilin1/presenilin2 conditional double knockout mice. Neurosci Bull 2009 Jun;25(3):131-7.
8. Liu RT, Zou LB, Lü QJ. Liquiritigenin inhibits Abeta(25-35)-induced neurotoxicity and secretion of Abeta(1-40) in rat hippocampal neurons. Acta Pharmacol Sin 2009 Jul;30(7):899-906.
9. Xiao X, Liu A, Wen H, Tian Y, Ni J, Liu G. Expression and localization of transcription factor Ets-1 in the rat ovary during the estrous cycle and pregnancy. Fertil Steril 2009;91(5 Suppl):1998-2005.
10. Qian J, Zhai A, Kao W, Li Y, Song W, Fu Y, Chen X, Zhang Q, Wu J, Li H, Zhong Z, Ling H, Zhang F. Modulation of miR-122 on persistently Borna disease virus infected human oligodendroglial cells. ANTIVIR RES 2010;87(2):249-56.
11. Chen W, Hou J, Yin Y, Jang J, Zheng Z, Fan H, Zou G. alpha-Bisabolol induces dose- and time-dependent apoptosis in HepG2 cells via a Fas- and mitochondrial-related pathway, involves p53 and NFkappaB. Biochem Pharmacol 2010;80(2):247-54.
12. Li XC, Tong GX, Zhang Y, Liu SX, Jin QH, Chen HH, Chen P. Neferine inhibits angiotensin II-stimulated proliferation in vascular smooth muscle cells through heme oxygenase-1. Acta Pharmacol Sin 2010;31(6):679-86.
13. Wu W, Yan C, Gan T, Chen Z, Lu X, Duerksen-Hughes PJ, Zhu X, Yang J. Nuclear proteome analysis of cisplatin-treated HeLa cells. MUTAT RES-REV MUTAT 2010;691(1-2):1-8.
14. Wan YJ, Li YY, Xia W, Chen J, Lv ZQ, Zeng HC, Zhang L, Yang WJ, Chen T, Lin Y, Wei J, Xu SQ. Alterations in tumor biomarker GSTP gene methylation patterns induced by prenatal exposure to PFOS. Toxicology 2010;274(1-3):57-64.
15. J. Dang, R.Jia, Y.Tu, S.Xiao, G.Ding. Erythropoietin prevents reactive oxygen species generation and renal tubular cell apoptosis at high glucose level. BIOMED PHARMACOTHER 2010 Dec;64(10):681-5.
16. Cai J, Yu C, Liu Y, Chen S, Guo Y, Yong J, Lu W, Ding M, Deng H. Generation of homogeneous PDX1(+) pancreatic progenitors from human ES cell-derived endoderm cells. J Mol Cell Biol 2010;2(1):50-60.
17. Ma Y, Niu R, Sun Z, Wang J, Luo G, Zhang J, Wang J. Inflammatory responses induced by fluoride and arsenic at toxic concentration in rabbit aorta. Arch Toxicol 2012 Jun;86(6):849-56.
18. Yang XL, Guo TK, Wang YH, Huang YH, Liu X, Wang XX, Li W, Zhao X, Wang LP, Yan S, Wu D, Wu YJ. Ginsenoside Rd attenuates the inflammatory response via modulating p38 and JNK signalingpathways in rats with TNBS-induced relapsing colitis. Int Immunopharmacol 2012 Feb;12(2):408-14.
19. Hao M, Kuang HY, Fu Z, Gao XY, Liu Y, Deng W. Exenatide prevents high-glucose-induced damage of retinal ganglion cells through a mitochondrialmechanism. Neurochem Int 2012 Jul;61(1):1-6.
20. Qian Y, Guan T, Huang M, Cao L, Li Y, Cheng H, Jin H, Yu D Neuroprotection by the soy isoflavone, genistein, via inhibition of mitochondria-dependentapoptosis pathways and reactive oxygen induced-NF-κB activation in a cerebral ischemia mouse model. Neurochem Int 2012 Jun;60(8):759-67.
21. Liu K, Wang H, Long Y, Ye J, Yuan L. Coordinate lentiviral expression of Cre recombinase and RFP/EGFP mediated by FMDV 2A andanalysis of Cre activity. J Cell Biochem 2012 Sep;113(9):2909-19.
22. Yu X, Tang J, Wang Q, Ye W, Tao K, Duan S, Lu C, Yang X, Dong S, Zheng X, Wang Y. The RxLR effector Avh241 from Phytophthora sojae requires plasma membrane localization toinduce plant cell death. New Phytol 2012 Oct;196(1):247-60.
23. Wang Y, Liu Q, Liu Z, Li B, Sun Z, Zhou H, Zhang X, Gong Y, Shao C. Berberine, a genotoxic alkaloid, induces ATM-Chk1 mediated G2 arrest in prostate cancer cells. MUTAT RES-REV MUTAT 2012 Jun 1;734(1-2):20-9.
24. Li R, Yu C, Gao R, Liu X, Lu J, Zhao L, Chen X, Ding Y, Wang Y, He J. Effects of DEHP on endometrial receptivity and embryo implantation in pregnant mice. J Hazard Mater 2012 Nov 30;241-242:231-40.
25. Yang M, Qin Z, Zhu Y, Li Y, Qin Y, Jing Y, Liu S. Vitamin D-binding protein in cerebrospinal fluid is associated with multiple sclerosis progression. Mol Neurobiol 2013 Jun;47(3):946-56.
26. Gao L, Song JR, Zhang JW, Zhao X, Zhao QD, Sun K, Deng WJ, Li R, Lv G, Cheng HY, Wei LX. Chloroquine promotes the anticancer effect of TACE in a rabbit VX2 liver tumor model. Int J Biol Sci 2013;9(4):322-30.
27. Pang X, Wei Y, Zhang Y, Zhang M, Lu Y, Shen P. Peroxisome proliferator-activated receptor-γ activation inhibits hepatocellular carcinoma cell invasion byupregulating plasminogen activator inhibitor-1. Cancer Sci 2013 Jun;104(6):672-80.
28. Xu J, Jia YY, Chen SR, Ye JT, Bu XZ, Hu Y, Ma YZ, Guo JL, Liu PQ. (E)-1-(4-ethoxyphenyl)-3-(4-nitrophenyl)-prop-2-en-1-one suppresses LPS-induced inflammatory responsethrough inhibition of NF-κB signaling pathway. Int Immunopharmacol 2013 Apr;15(4):743-51.
29. Xu P, Zhang XX, Miao C, Fu Z, Li Z, Zhang G, Zheng M, Liu Y, Yang L, Wang T. Promotion of melanoma cell invasion and tumor metastasis by microcystin-LR via phosphatidylinositol 3-kinase/AKT pathway. Environ Sci Technol 2013 Aug 6;47(15):8801-8.
30. Mo QQ, Chen PB, Jin X, Chen Q, Tang L, Wang BB, Li KZ, Wu P, Fang Y, Wang SX, Zhou JF, Ma D, Chen G. Inhibition of Hec1 expression enhances the sensitivity of human ovarian cancer cells to paclitaxel. ACTA PHARMACOL SIN 2013 Apr;34(4):541-8.
31. Sun LL, Zhang Y, Liu JF, Wang J, Zhu WL, Zhao LY, Xue YX, Lu L, Shi J. Role of melanin-concentrating hormone in the nucleus accumbens shell in rats behaviourally sensitized tomethamphetamine. INT J NEUROPSYCHOPH 2013 Sep;16(8):1767-80.
32. Liu E, Kuang Y, He W, Xing X, Gu J. Casticin Induces Human Glioma Cell Death through Apoptosis and Mitotic Arrest. CELL PHYSIOL BIOCHEM 2013 Jun 3;31(6):805-814.
33. Ge D, Kong X, Liu W, Zhao J, Su L, Zhang S, Zhang Y, Zhao B, Miao J. Phosphorylation and nuclear translocation of integrin β4 induced by a chemical small molecule contribute toapoptosis in vascular endothelial cells. Apoptosis 2013 Sep;18(9):1120-31.
34. Yang J, Huang H, Yang H, He X, Jiang X, Shi Y, Alatangaole D, Shi L, Zhou N. Specific activation of the G protein-coupled receptor BNGR-A21 by the neuropeptide corazonin from the silkworm, Bombyx mori, dually couples to the G(q) and G(s) signaling cascades. J Biol Chem 2013 Apr 26;288(17):11662-75.
35. Xu WP, Yi M, Li QQ, Zhou WP, Cong WM, Yang Y, Ning BF, Yin C, Huang ZW, Wang J, Qian H, Jiang CF, Chen YX, Xia CY, Wang HY, Zhang X, Xie WF. Perturbation of miR-370-LIN28A-NF-κB regulatory circuit contributes to the development of hepatocellularcarcinoma. Hepatology 2013 Dec;58(6):1977-91.

36. Yin C, Wang PQ, Xu WP, Yang Y, Zhang Q, Ning BF, Zhang PP, Zhou WP, Xie WF, Chen WS, Zhang X. Hepatocyte nuclear factor-4α reverses malignancy of hepatocellular carcinoma through regulating miR-134 in theDLK1-DIO3 region. Hepatology 2013 Dec;58(6):1964-76.
37. Zhang X, Chen G, Lu Y, Liu J, Fang M, Luo J, Cao Q, Wang X. Association of Mitochondrial Letm1 with Epileptic Seizures. Cereb Cortex 2014 Oct;24(10):2533-40.
38. Sun H, Wu Y, Fu D, Liu Y, Huang C. SIRT6 regulates osteogenic differentiation of rat bone marrow mesenchymal stem cells partially via suppressing the nuclear factor-κB signaling pathway. Stem Cells 2014 Jul;32(7):1943-55.
39. Cao M, Hou D, Liang H, Gong F, Wang Y, Yan X, Jiang X, Wang C, Zhang J, Zen K, Zhang CY, Chen X. miR-150 promotes the proliferation and migration of lung cancer cells by targeting SRC kinase signalling inhibitor 1. Eur J Cancer 2014 Mar;50(5):1013-24.
40. Jiang T, Yu JT, Zhu XC, Tan MS, Gu LZ, Zhang YD, Tan L. Triggering receptor expressed on myeloid cells 2 knockdown exacerbates aging-related neuroinflammation and cognitive deficiency in senescence-accelerated mouse prone 8 mice. Neurobiol Aging 2014 Jun;35(6):1243-51.
41. Wang G, Liu X, Meng L, Liu S, Wang L, Li J, Cui C, Meng J, Hu S, Wei Y. Up-regulated lipocalin-2 in pulmonary hypertension involving in pulmonary artery SMC resistance to apoptosis. Int J Biol Sci 2014 Jul 17;10(7):798-806.
42. Tang W, Yang J, Zhang F, Guo H, Peng F, Wang X. Activation of extracellular signal-regulated kinase 1/2 and Sp1 may contribute to the expression of tissue inhibitor of metalloproteinases-1 induced by transforming growth factor-β1 in human pulmonary arterial smooth muscle cells. Cytotherapy 2014 Feb;16(2):225-33.
43. Deng Z, Yan F, Jin Q, Li F, Wu J, Liu X, Zheng H. Reversal of multidrug resistance phenotype in human breast cancer cells using doxorubicin-liposome-microbubble complexes assisted by ultrasound. J Control Release 2014 Jan 28;174:109-16.
44. Guo S, Xu X, Tang Y, Zhang C, Li J, Ouyang Y, Ju J, Bie P, Wang H. miR-15a inhibits cell proliferation and epithelial to mesenchymal transition in pancreatic ductal adenocarcinoma by down-regulating Bmi-1 expression. Cancer Lett 2014 Mar 1;344(1):40-6.
45. Cong ZX, Wang HD, Zhou Y, Wang JW, Pan H, Zhang DD, Zhang L, Zhu L. Temozolomide and irradiation combined treatment-induced Nrf2 activation increases chemoradiation sensitivity in human glioblastoma cells. NEURO-ONCOLOGY 2014 Jan;116(1):41-8.
46. Li S, Wang L, Zhao Q, Liu Y, He L, Xu Q, Sun X, Teng L, Cheng H, Ke Y. SHP2 Positively Regulates TGFβ1-induced Epithelial-mesenchymal Transition Modulated by Its Novel Interacting Protein Hook1. J Biol Chem 2014 Dec 5;289(49):34152-60.
47. Chu H, Ding H, Tang Y, Dong Q. Erythropoietin protects against hemorrhagic blood-brain barrier disruption through the effects of aquaporin-4. Lab Invest 2014 Sep;94(9):1042-53.
48. Qian J, Wu C, Chen X, Li X, Ying G, Jin L, Ma Q, Li G, Shi Y, Zhang G, Zhou N. Differential requirements of arrestin-3 and clathrin for ligand-dependent and-independent internalization of human G protein-coupled receptor 40. Cell Signal 2014 Nov;26(11):2412-23.
49. Wang S, Li Y, Fan J, Wang Z, Zeng X, Sun Y, Song P, Ju D. The role of autophagy in the neurotoxicity of cationic PAMAM dendrimers. Biomaterials 2014 Aug;35(26):7588-97.
50. Zhu Y, Qin Z, Gao J, Yang M, Qin Y, Shen T, Liu S. Vitamin D Therapy in Experimental Allergic Encephalomyelitis Could be Limited by Opposing Effects of Sphingosine 1-Phosphate and Gelsolin Dysregulation. Mol Neurobiol 2014 Dec;50(3):733-43.
51. Liu R, Li X, Luo L, Qiang X, Hylemon PB, Jiang Z, Zhang L, Zhou H. Taurocholate Induces Cyclooxygenase-2 Expression via the Sphingosine 1-phosphate Receptor 2 in a Human Cholangiocarcinoma Cell Line. J BIOL CHEM 2015 Dec 25;290(52):30988-1002.
52. Wang Y, Cui Y, Cao F, Qin Y, Li W, Zhang J. Ganglioside GD1a suppresses LPS-induced pro-inflammatory cytokines in RAW264.7 macrophages by reducing MAPKs and NF-κB signaling pathways through TLR4. Int Immunopharmacol 2015 Sep;28(1):136-45.
53. Wang C, Qu B, Wang Z, Ju J, Wang Y, Wang Z, Cao P, Wang D. Proteomic identification of differentially expressed proteins in vascular wall of patients with ruptured intracranial aneurysms. Atherosclerosis 2015 Feb;238(2):201-6.
54. Zhu XC, Jiang T, Zhang QQ, Cao L, Tan MS, Wang HF, Ding ZZ, Tan L, Yu JT. Chronic Metformin Preconditioning Provides Neuroprotection via Suppression of NF-κB-Mediated Inflammatory Pathway in Rats with Permanent Cerebral Ischemia. Mol Neurobiol 2015 Aug;52(1):375-85.
55. Guo F, Jiang T, Song W, Wei H, Wang F, Liu L, Ma L, Yin H, Wang Q, Xiong L. Electroacupuncture Attenuates Cerebral Ischemia-Reperfusion Injury in Diabetic Mice Through Adiponectin Receptor 1-Mediated Phosphorylation of GSK-3β. Mol Neurobiol 2015 Apr;51(2):685-95.
56. Zhang Y, Lv X, Bai Y, Zhu X, Wu X, Chao J, Duan M, Buch S, Chen L, Yao H. Involvement of sigma-1 receptor in astrocyte activation induced by methamphetamine via up-regulation of its own expression. J NEUROINFLAMM 2015 Feb 17;12:29.
57. Xie Q, Wang Z, Huang Y, Bi X, Zhou H, Lin M, Yu Z, Wang Y, Ni N, Sun J, Wu S, You Z, Guo C, Sun H, Wang Y, Gu P, Fan X. Characterization of human ethmoid sinus mucosa derived mesenchymal stem cells (hESMSCs) and the application of hESMSCs cell sheets in bone regeneration. Biomaterials 2015 Oct;66:67-82.
58. Liu X, Dai F, Guo E, Li K, Ma L, Tian L, Cao Y, Zhang G, Palli SR, Li S. 20-Hydroxyecdysone (20E) Primary Response Gene E93 Modulates 20E Signaling to Promote Bombyx Larval-Pupal Metamorphosis. J Biol Chem 2015 Nov 6;290(45):27370-83.
59. Chen D, Su A, Fu Y, Wang X, Lv X, Xu W, Xu S, Wang H, Wu Z. Harmine blocks herpes simplex virus infection through downregulating cellular NF-κB and MAPK pathways induced by oxidative stress. ANTIVIR RES 2015 Nov;123:27-38.
60. Li C, Lu Q, Huang P, Fu T, Li C, Guo L, Xu X. Activity-dependent downregulation of M-Type (Kv7) K+ channels surface expression requires the activation of iGluRs/Ca2+/PKC signaling pathway in hippocampal neuron. Neuropharmacology 2015 Aug;95:154-67.
61. Liu GY, , Jiang XX, Zhu X, He WY, Kuang YL, Ren K, Lin Y, Gou X. ROS activates JNK-mediated autophagy to counteract apoptosis in mouse mesenchymal stem cells in vitro. Acta Pharmacol Sin 2015 Dec;36(12):1473-9.
62. Xie Q, Wang Z, Zhou H, Yu Z, Huang Y, Sun H, Bi X, Wang Y, Shi W, Gu P, Fan X. The role of miR-135-modified adipose-derived mesenchymal stem cells in bone regeneration. Biomaterials 2016 Jan;75:279-94.
63. Wang Q, Zhang X, Shen E, Gao J, Cao F, Wang X, Li Y, Tian T, Wang J, Chen Z, Wang J, Shen L. The anti-HER3 antibody in combination with trastuzumab exerts synergistic antitumor activity in HER2-positive gastric cancer. Cancer Lett 2016 Sep 28;380(1):20-30.
64. Cheng X, He S, Yuan J, Miao S, Gao H, Zhang J, Li Y, Peng W, Wu P. Lipoxin A4 attenuates LPS-induced mouse acute lung injury via Nrf2-mediated E-cadherin expression inairway epithelial cells. FREE RADICAL BIO MED 2016 Apr;93:52-66.
65. Chen G, Xin A, Liu Y, Shi C, Chen J, Tang X, Chen Y, Yu M, Peng X, Li L, Sun X. Integrins β1 and β3 are biomarkers of uterine condition for embryo transfer. J Transl Med 2016 Oct 26;14(1):303.
66. Wang WT, Ye H, Wei PP, Han BW, He B, Chen ZH, Chen YQ. LncRNAs H19 and HULC, activated by oxidative stress, promote cell migration and invasion incholangiocarcinoma through a ceRNA manner. J Hematol Oncol 2016 Nov 3;9(1):117.
67. Liu W, Chen C, Chen L, Wang L, Li J, Chen Y, Jin J, Kawan A, Zhang X. Sex-dependent effects of microcystin-LR on hypothalamic-pituitary-gonad axis and gametogenesis of adultzebrafish. SCI REP-UK 2016 Mar 10;6:22819.
68. Min J, Weitian Z, Peng C, Yan P, Bo Z, Yan W, Yun B, Xukai W. Correlation between insulin-induced estrogen receptor methylation and atherosclerosis. Cardiovasc Diabetol 2016 Nov 10;15(1):156.

69. Shu Y, Xiao B, Wu Q, Liu T, Du Y, Tang H, Chen S, Feng L, Long L, Li Y, 5. The Ephrin-A5/EphA4 Interaction Modulates Neurogenesis and Angiogenesis by the p-Akt and p-ERKPathways in a Mouse Model of TLE. Mol Neurobiol 2016 Jan;53(1):561-76.
70. Qu Z, Wu J, Wu J, Luo D, Jiang C, Ding Y. Exosomes derived from HCC cells induce sorafenib resistance in hepatocellular carcinoma both in vivo and in vitro. J EXP CLIN CANC RES 2016 Sep 30;35(1):159.
71. Chen Y, Zhao R, Zhao Q, Shao Y, Zhang S. Knockdown of HPIP Inhibits the Proliferation and Invasion of Head-and-Neck Squamous Cell CarcinomaCells by Regulating PI3K/Akt Signaling Pathway. Oncol Res 2016;24(3):153-60.
72. Liu L, Li Y, Wang Y, Zhao P, Wei S, Li Z, Chang H, He H. Biochemical characterization and functional analysis of the POU transcription factor POU-M2 of Bombyx mori. Int J Biol Macromol Int J Biol Macromol.
73. Liu W, Zhang Y, Xia P, Li S, Feng X, Gao Y, Wang K, Song Y, Duan Z, Yang S, Shao Z, Yang C. MicroRNA-7 regulates IL-1β-induced extracellular matrix degeneration by targeting GDF5 in human nucleuspulposus cells. Biomed Pharmacother 2016 Oct;83:1414-1421.
74. Lu Y, Xu S, Chen H, He M, Deng Y, Cao Z, Pi H, Chen C, Li M, Ma Q, Gao P, Ji Y, Zhang L, Yu Z, Zhou Z. CdSe/ZnS quantum dots induce hepatocyte pyroptosis and liver inflammation via NLRP3 inflammasomeactivation. Biomaterials 2016 Jun;90:27-39.
75. Ma Y, Wei Z, Bast RC Jr, Wang Z, Li Y, Gao M, Liu Y, Wang X, Guo C, Zhang L, Wang X. Downregulation of TRIM27 expression inhibits the proliferation of ovarian cancer cells in vitro and in vivo. Lab Invest 2016 Jan;96(1):37-48.
76. Wang K, Wang Y, Qi Q, Zhang F, Zhang Y, Zhu X, Liu G, Luan Y, Zhao Z, Cai J, Cao J, Li S. Inhibitory effects of S-allylmercaptocysteine against benzo(a)pyrene-induced precancerous carcinogenesisin human lung cells. Int Immunopharmacol 2016 May;34:37-43.
77. Fan TF, Wu TF, Bu LL, Ma SR, Li YC, Mao L, Sun ZJ, Zhang WF. Dihydromyricetin promotes autophagy and apoptosis through ROS-STAT3 signaling in head and neckssquamous cell carcinoma. ONCOTARGET 2016 Sep 13;7(37):59691-59703.
78. Shen ZL, Wang B, Jiang KW, Ye CX, Cheng C, Yan YC, Zhang JZ, Yang Y, Gao ZD, Ye YJ, Wang S. Downregulation of miR-199b is associated with distant metastasis in colorectal cancer via activation of SIRT1 and inhibition of CREB/KISS1 signaling. ONCOTARGET 2016 Jun 7;7(23):35092-105.
79. Wang Y, Leng H, Chen H, Wang L, Jiang N, Huo X, Yu B. Knockdown of UBE2T Inhibits Osteosarcoma Cell Proliferation, Migration, and Invasion by Suppressing thePI3K/Akt Signaling Pathway. Oncol Res 2016;24(5):361-369.
80. Zhu C, Yu J, Pan Q, Yang J, Hao G, Wang Y, Li L, Cao H. Hypoxia-inducible factor-2 alpha promotes the proliferation of human placenta-derived mesenchymal stemcells through the MAPK/ERK signaling pathway. SCI REP-UK 2016 Oct 21;6:35489.
81. Xie S, Jiang H, Zhai XW, Wei F, Wang SD, Ding J, Chen Y. Antitumor action of CDK inhibitor LS-007 as a single agent and in combination with ABT-199 against humanacute leukemia cells. Acta Pharmacol Sin 2016 Nov;37(11):1481-1489.
82. Zhao Z, Zhao J, Xue J, Zhao X, Liu P. Autophagy inhibition promotes epithelial-mesenchymal transition through ROS/HO-1 pathway in ovariancancer cells. Am J Cancer Res 2016 Oct 1;6(10):2162-2177.
83. Huang W, Li J, Guo X, Zhao Y, Yuan X. miR-663a inhibits hepatocellular carcinoma cell proliferation and invasion by targeting HMGA2. Biomed Pharmacother 2016 Jul;81:431-8.
84. Li G, Li YY, Sun JE, Lin WH, Zhou RX. ILK-PI3K/AKT pathway participates in cutaneous wound contraction by regulating fibroblast migration anddifferentiation to myofibroblast. Lab Invest 2016 Jul;96(7):741-51.
85. You C, Liang H, Sun W, Li J, Liu Y, Fan Q, Zhang H, Yue X, Li J, Chen X, Ba Y. Deregulation of the miR-16-KRAS axis promotes colorectal cancer. SCI REP-UK 2016 Nov 18;6:37459.
86. Liu Y, Zheng Z, Shu B, Meng J, Zhang Y, Zheng C, Ke X, Gong P, Hu Q, Wang H. SUMO Modification Stabilizes Enterovirus 71 Polymerase 3D To Facilitate Viral Replication. J Virol 2016 Nov 14;90(23):10472-10485.
87. Zhu Y, Wei W, Ye T, Liu Z, Liu L, Luo Y, Zhang L, Gao C, Wang N, Yu L. Small Molecule TH-39 Potentially Targets Hec1/Nek2 Interaction and Exhibits Antitumor Efficacy in K562Cells via G0/G1 Cell Cycle Arrest and Apoptosis Induction. CELL PHYSIOL BIOCHEM 2016;40(1-2):297-308.
88. Hong Y, Wang X, Sun S, Xue G, Li J, Hou Y. Progesterone exerts neuroprotective effects against Aβ-induced neuroinflammation by attenuating ERstress in astrocytes. Int Immunopharmacol 2016 Apr;33:83-9.
89. Yao Y, Zhang X, Chen HP, Li L, Xie W, Lan G, Zhao ZW, Zheng XL, Wang ZB, Tang CK. MicroRNA-186 promotes macrophage lipid accumulation and secretion of pro-inflammatory cytokines bytargeting cystathionine γ-lyase in THP-1 macrophages. Atherosclerosis 2016 Jul;250:122-32.
90. Li J, Bian EB, He XJ, Ma CC, Zong G, Wang HL, Zhao B. Epigenetic repression of long non-coding RNA MEG3 mediated by DNMT1 represses the p53 pathway ingliomas. Int J Oncol 2016 Feb;48(2):723-33.
91. Zhao M, Su Z, Zhang S, Zhuang L, Xie Y, Li X. Suppressive Role of MicroRNA-148a in Cell Proliferation and Invasion in Ovarian Cancer Through TargetingTransforming Growth Factor-β-Induced 2. Oncol Res 2016;24(5):353-360.
92. Gao Y, Ma L, Luo CL, Wang T, Zhang MY, Shen X, Meng HH, Ji MM, Wang ZF, Chen XP, Tao LY. IL-33 Exerts Neuroprotective Effect in Mice Intracerebral Hemorrhage Model Through Suppressing Inflammation/Apoptotic/Autophagic Pathway. Mol Neurobiol 2016 Jul 12. [Epub ahead of print]
93. Zou L, Chai J, Gao Y, Guan J, Liu Q, Du JJ. Down-regulated PLAC8 promotes hepatocellular carcinoma cell proliferation by enhancingPI3K/Akt/GSK3β/Wnt/β-catenin signaling. Biomed Pharmacother 2016 Dec;84:139-146.
94. Wang Y, Zhang B, Liu W, Dai Y, Shi Y, Zeng Q, Wang F. Noninvasive bioluminescence imaging of the dynamics of sanguinarine induced apoptosis via activation ofreactive oxygen species. ONCOTARGET 2016 Apr 19;7(16):22355-67.
95. Liang H, Liu S, Chen Y, Bai X, Liu L, Dong Y, Hu M, Su X, Chen Y, Huangfu L, Li X, Gu Y, Shan H. miR-26a suppresses EMT by disrupting the Lin28B/let-7d axis: potential cross-talks among miRNAs in IPF. J MOL MED 2016 Jun;94(6):655-65.
96. Liu C, Qian P, Yang L, Zhang L, Chen C, He M, Lu Y, Feng W, Li M, Zhang Y, Zhong M, Yu Z, Zhou Z. Pubertal exposure to di-(2-ethylhexyl)-phthalate inhibits G9a-mediated histone methylation duringspermatogenesis in mice. Arch Toxicol 2016 Apr;90(4):955-69.
97. Zhang Z, Guo M, Zhang J, Du C, Xing Y. Leptin Regulates Tau Phosphorylation through Wnt Signaling Pathway in PC12 Cells. NEUROSIGNALS 2016 Oct 24;24(1):95-101.
98. Guo W, Yu D, Wang X, Luo C, Chen Y, Lei W, Wang C, Ge Y, Xue W, Tian Q, Gao X, Yao W. Anti-inflammatory effects of interleukin-23 receptor cytokine-binding homology region rebalance T celldistribution in rodent collagen-induced arthritis. ONCOTARGET 2016 May 31;7(22):31800-13.
99. Xiao J, Bei Y, Liu J, Dimitrova-Shumkovska J, Kuang D, Zhou Q, Li J, Yang Y, Xiang Y, Wang F, Yang C, Yang W. miR-212 downregulation contributes to the protective effect of exercise against non-alcoholic fatty liver viatargeting FGF-21. J Cell Mol Med 2016 Feb;20(2):204-16.
100. Yuan C, Zhu X, Han Y, Song C, Liu C, Lu S, Zhang M, Yu F, Peng Z, Zhou C. Elevated HOXA1 expression correlates with accelerated tumor cell proliferation and poor prognosis ingastric cancer partly via cyclin D1. J EXP CLIN CANC RES 2016 Jan 21;35:15.
101. Yang R, Liu M, Liang H, Guo S, Guo X, Yuan M, Lian H, Yan X, Zhang S, Chen X, Fang F, Guo H, Zhang C. miR-138-5p contributes to cell proliferation and invasion by targeting Survivin in bladder cancer cells. Mol Cancer 2016 Dec 15;15(1):82.
102. Ling X, Zhang G, Chen Q, Yang H, Sun L, Zhou N, Wang Z, Zou P, Wang X, Cui Z, Liu J, Ao L, Cao J. Shorter sperm telomere length in association with exposure to polycyclic aromatic hydrocarbons: Resultsfrom the MARHCS cohort study in Chongqing, China and in vivo animal experiments. Environ Int 2016 Oct;95:79-85.
103. Hua K, Jin J, Zhao J, Song J, Song H, Li D, Maskey N, Zhao B, Wu C, Xu H, Fang L. miR-135b, upregulated in breast cancer, promotes cell growth and disrupts the cell cycle by regulating LATS2. Int J Oncol 2016 May;48(5):1997-2006.

104. Qin Y, Jiang Y, Sheikh AS, Shen S, Liu J, Jiang D. Interleukin-13 stimulates MUC5AC expression via a STAT6-TMEM16A-ERK1/2 pathway in human airwayepithelial cells. Int Immunopharmacol 2016 Nov;40:106-114.
105. Ren M, Li K, Wang D, Guo J, Li J, Yang G, Long X, Shen W, Hu R, Wang X, Zeng K. Neurofibromin Regulates Seizure Attacks in the Rat Pilocarpine-Induced Model of Epilepsy. Mol Neurobiol 2016 Nov;53(9):6069-6077.
106. Li L, Gu M, You B, Shi S, Shan Y, Bao L, You Y. Long non-coding RNA ROR promotes proliferation, migration and chemoresistance of nasopharyngeal carcinoma. Cancer Sci 2016 Sep;107(9):1215-22.
107. Ni X, Gao Y, Wu Z, Ma L, Chen C, Wang L, Lin Y, Hui L, Pan G. Functional human induced hepatocytes (hiHeps) with bile acid synthesis and transport SCI REP-UK 2016 Dec 9;6:38694.
108. Sun L, Wang D, Li X, Zhang L, Zhang H, Zhang Y5. Extracellular matrix protein ITGBL1 promotes ovarian cancer cell migration and adhesion through Wnt/PCPsignaling and FAK/SRC pathway. Biomed Pharmacother 2016 Jul;81:145-51.
109. Li ZW, Wu B, Ye P, Tan ZY, Ji YH. Brain natriuretic peptide suppresses pain induced by BmK I, a sodium channel-specific modulator, in rats. J Headache Pain 2016 Dec;17(1):90.
110. Kuang X, Wei C, Zhang T, Yang Z, Chi J, Wang L. miR-378 inhibits cell growth and enhances apoptosis in human myelodysplastic syndromes. Int J Oncol 2016 Nov;49(5):1921-1930.
111. Wang YJ, Liu JZ, Lv P, Dang Y, Gao JY, Wang Y. Long non-coding RNA CCAT2 promotes gastric cancer proliferation and invasion by regulating the E-cadherin and LATS2. Am J Cancer Res 2016 Nov 1;6(11):2651-2660.
112. Lu Y, Zhu M, Li W, Lin B, Dong X, Chen Y, Xie X, Guo J, Li M. Alpha fetoprotein plays a critical role in promoting metastasis of hepatocellular carcinoma cells. J Cell Mol Med 2016 Mar;20(3):549-58.
113. Zhou X, Zhuang Z, Wang W, He L, Wu H, Cao Y, Pan F, Zhao J, Hu Z, Sekhar C, Guo Z. OGG1 is essential in oxidative stress induced DNA demethylation. Cell Signal 2016 Sep;28(9):1163-71.
114. Liu Y, Li Y, Li N, Teng W, Wang M, Zhang Y, Xiao Z. TGF-β1 promotes scar fibroblasts proliferation and transdifferentiation via up-regulating MicroRNA-21. SCI REP-UK 2016 Aug 24;6:32231.
115. Huang Q, Elkhooly TA, Liu X, Zhang R, Yang X, Shen Z, Feng Q. Effects of hierarchical micro/nano-topographies on the morphology, proliferation and differentiation ofosteoblast-like cells. COLLOID SURFACE B 2016 Sep 1;145:37-45.
116. Li H, Fan J, Sun L, Liu X, Cheng P, Fan H. Functional regeneration of ligament-bone interface using a triphasic silk-based graft. Biomaterials 2016 Nov;106:180-92.
117. Zhang T, Wu Y, Fang Z, Yan Q, Zhang S, Sun R, Khaliq J, Li Y. Low expression of RBMS3 and SFRP1 are associated with poor prognosis in patients with gastric cancer. Am J Cancer Res 2016 Nov 1;6(11):2679-2689.
118. Sun JY, Wang JD, Wang X, Liu HC, Zhang MM, Liu YC, Zhang CH, Su Y, Shen YY, Guo YW, Shen AJ, Geng MY. Marine-derive chromopeptide A, a novel class I HDAC inhibitor, suppresses human prostate cancer cellproliferation and migration. Acta Pharmacol Sin 2017 Jan 23.
119. Zhou ZR, Yang ZZ, Wang SJ, Zhang L, Luo JR, Feng Y, Yu XL, Chen XX, Guo XM. The Chk1 inhibitor MK-8776 increases the radiosensitivity of human triple-negative breast cancer byinhibiting autophagy. Acta Pharmacol Sin 2017 Jan 2.
120. Ji J, Zeng XN, Cao LL, Zhang L, Zhao Z, Yang DD, Sun XL. PPARβ/δ activation protects against corticosterone-induced ER stress in astrocytes by inhibiting the CpG hypermethylation of microRNA-181a. Neuropharmacology 2017 Feb;113(Pt A):396-406.
121. Li Y, Wang LM, Xu JZ, Tian K, Gu CX, Li ZF. Gastrodia elata attenuates inflammatory response by inhibiting the NF-κB pathway in rheumatoid arthritisfibroblast-like synoviocytes. Biomed Pharmacother 2017 Jan;85:177-181.
122. Gui Z, Luo F, Yang Y, Shen C, Li S, Xu J. Oridonin inhibition and miR-200b-3p/ZEB1 axis in human pancreatic cancer. Int J Oncol 2017 Jan;50(1):111-120.
123. Chen Z, Zuo X, He D, Ding S, Xu F, Yang H, Jin X, Fan Y, Ying L, Tian C, Ying C. Long-term exposure to a 'safe' dose of bisphenol A reduced protein acetylation in adult rat testes. SCI REP-UK 2017 Jan 9;7:40337.
124. Tang Z, Li J, Shen Q, Feng J, Liu H, Wang W, Xu L, Shi G, Ye X, Ge M, Zhou X, Ni S. Contribution of upregulated dipeptidyl peptidase 9 (DPP9) in promoting tumoregenicity, metastasis and theprediction of poor prognosis in non-small cell lung cancer (NSCLC). Int J Cancer 2017 Apr 1;140(7):1620-1632.
125. Sun Z, Nie Q, Zhang L, Niu R, Wang J, Wang S. Fluoride reduced the immune privileged function of mouse Sertoli cells via the regulation of Fas/FasLsystem. Chemosphere 2017 Feb;168:318-325.
126. Pan H, Xie Y, Zhang Z, Li K, Hu D, Zheng X, Fan Q, Tang T. YAP-mediated mechanotransduction regulates osteogenic and adipogenic differentiation of BMSCs onhierarchical structure. COLLOID SURFACE B 2017 Jan 23;152:344-353.
127. Zhou X, Sun F, Luo S, Zhao W, Yang T, Zhang G, Gao M, Lu R, Shu Y, Mu W, Zhuang Y, Ding F, Xu C, Lu Y. Let-7a Is an Antihypertrophic Regulator in the Heart via Targeting Calmodulin. Int J Biol Sci 2017 Jan 1;13(1):22-31.
128. Shen J, Xu S, Zhou H, Liu H, Jiang W, Hao J, Hu Z. IL-1β induces apoptosis and autophagy via mitochondria pathway in human degenerative nucleus pulposuscells. SCI REP-UK 2017 Jan 25;7:41067.
129. Jiang K, Lu Q, Li Q, Ji Y, Chen W, Xue X. Astragaloside IV inhibits breast cancer cell invasion by suppressing Vav3 mediated Rac1/MAPK signaling. Int Immunopharmacol 2017 Jan;42:195-202.
130. Zhao H, Xue Y, Guo Y, Sun Y, Liu D, Wang X. Inhibition of endocan attenuates monocrotaline-induced connective tissue disease related pulmonaryarterial hypertension. Int Immunopharmacol 2017 Jan;42:115-121.
131. Bao X, Cai Y, Wang Y, Zhao J, He X, Yu D, Huang J, Jing S, Du Z, Yang T, Warner M, Gustafsson JA, Fan X. Liver X Receptor β Is Involved in Formalin-Induced Spontaneous Pain. Mol Neurobiol 2017 Mar;54(2):1467-1481.
132. Liu H, Ai J, Shen A, Chen Y, Wang X, Peng X, Chen H, Shen Y, Huang M, Ding J, Geng M. c-Myc Alteration Determines the Therapeutic Response to FGFR Inhibitors. Clin Cancer Res 2017 Feb 15;23(4):974-984.
133. Shi Y, Sun X, He X. Overexpression of Aristaless-Like Homeobox-4 Inhibits Proliferation, Invasion, and EMT in HepatocellularCarcinoma Cells. Oncol Res 2017 Jan 2;25(1):11-18.
134. Zhao P, Guan HT, Dai ZJ, Ma YG, Liu XX, Wang XJ. Knockdown of Tripartite Motif-Containing Protein 37 (TRIM37) Inhibits the Proliferation and Tumorigenesisin Colorectal Cancer Cells. Oncol Res 2017 Jan 2;25(1):115-122.
135. Zhou H, Yang C, Chen H, Li X, Li Y, Fan X. A simple G-quadruplex molecular beacon-based biosensor for highly selective detection of microRNA. Biosens Bioelectron 2017 Jan 15;87:552-557.
136. Ma Y, Xu X, Luo M. CXCR6 promotes tumor cell proliferation and metastasis in osteosarcoma through the Akt pathway. Cell Immunol 2017 Jan;311:80-85.
137. Liu X, Quan B, Tian Z, Xi H, Jia G, Wang H, Zhang L, Liu R, Ma C, Han F, Li H, Yuan F. Elevated expression of KLK8 predicts poor prognosis in colorectal cancer. Biomed Pharmacother 2017 Jan 28;88:595-602.
138. Chen Y, Zhang Q, Ding C, Zhang X, Qiu X, Zhang Z. Stathmin1 overexpression in hypopharyngeal squamous cell carcinoma: A new promoter in FaDu cellproliferation and migration. Int J Oncol 2017 Jan;50(1):31-40.
139. Wang X, Sha L, Sun N, Shen Y, Xu Q. Deletion of mTOR in Reactive Astrocytes Suppresses Chronic Seizures in a Mouse Model of Temporal LobeEpilepsy. Mol Neurobiol 2017 Jan;54(1):175-187.
140. Yang Y, Hu X, Cheng L, Tang W, Zhao W, Yang Y, Zuo J. Periplocoside A ameliorated type II collagen-induced arthritis in mice via regulation of the balance ofTh17/Treg cells. Int Immunopharmacol 2017 Jan 7;44:43-52.
141. Guo Y, Han B, Luo K, Ren Z, Cai L, Sun L. NOX2-ROS-HIF-1α signaling is critical for the inhibitory effect of oleanolic acid on rectal cancer cellproliferation. Biomed Pharmacother 2017 Jan;85:733-739.
142. Yang K, Wang Y, Ju Y, Li G, Liu C, Liu J, Liu Q, Wen X, Liu LC. p75 neurotrophin receptor regulates differential mineralization of rat ectomesenchymal stem cells. CELL PROLIFERAT 2017 Feb;50(1).

143. He ZJ, Zhu FY, Li SS, Zhong L, Tan HY, Wang K. Inhibiting ROS-NF-κB-dependent autophagy enhanced brazilin-induced apoptosis in head and necksquamous cell carcinoma. Food Chem Toxicol 2017 Jan 4;101:55-66.

144. Zheng N, Liu L, Liu WW, Li F, Hayashi T, Tashiro SI, Onodera S, Ikejima T. Crosstalk of ROS/RNS and autophagy in silibinin-induced apoptosis of MCF-7 human breast cancer cells invitro. Acta Pharmacol Sin 2017 Feb;38(2):277-289.

145. Liu J, Li Q, Li R, Ren P, Dong S. MicroRNA-363-3p inhibits papillary thyroid carcinoma progression by targeting PIK3CA. Am J Cancer Res 2017 Jan 1;7(1):148-158.

146. Zhang B, Chang M, Wang J, Liu Y. Neuroglobin functions as a prognostic marker and promotes the tumor growth of glioma via uppressingapoptosis. Biomed Pharmacother 2017 Jan 16;88:173-180.

147. Huang T, Liu R, Fu X, Yao D, Yang M, Liu Q, Lu WW, Wu C, Guan M. Aging Reduces an ERRalpha-Directed Mitochondrial Glutaminase Expression Suppressing GlutamineAnaplerosis and Osteogenic Differentiation of Mesenchymal Stem Cells. Stem Cells 2017 Feb;35(2):411-424.

148. Mei L, Yuan L, Shi W, Fan S, Tang C, Fan X, Yang W, Qian Y, Hussain M, Wu X. SUMOylation of large tumor suppressor 1 at Lys751 attenuates its kinase activity and tumor-suppressorfunctions. Cancer Lett 2017 Feb 1;386:1-11.

149. Luo C, Chen S, Xu N, Sai WB, Zhao W, Li YC, Hu XJ, Tian H, Gao XD, Yao WB. Establishment of a fluorescence-based method to evaluate endocytosis of desialylated glycoproteins invitro. Biomed Pharmacother 2017 Jan 14;88:87-94.

150. Lin S, Wang J, Wang L, Wen J, Guo Y, Qiao W, Zhou J, Xu G, Zhi F. Phosphodiesterase-5 inhibition suppresses colonic inflammation-induced tumorigenesis via blocking therecruitment of MDSC. Am J Cancer Res 2017 Jan 1;7(1):41-52.

151. Xie Y, Guo H, Wang L, Xu L, Zhang X, Yu L, Liu Q, Li Y, Zhao N, Zhao N, Ye R, Liu X. Human albumin attenuates excessive innate immunity via inhibition of microglial Mincle/Syk signaling insubarachnoid hemorrhage. Brain Behav Immun 2017 Feb;60:346-360.

152. Huang N, Cheng S, Zhang X, Tian Q, Pi J, Tang J, Huang Q, Wang F, Chen J, Xie Z, Xu Z, Chen W, Zheng H, Cheng Y. Efficacy of NGR peptide-modified PEGylated quantum dots for crossing the blood-brain barrier andtargeted fluorescence imaging of glioma and tumor vasculature. Nanomedicine 2017 Jan;13(1):83-93.

153. Yin L, Mao Y, Song H, Wang Y, Zhou W, Zhang Z. Vincristine alleviates adriamycin-induced nephropathy through stabilizing actin cytoskeleton. Cell Biosci 2017 Jan 3;7:1.

154. Chen T, Xu X, Zhao Z, Zhao F, Gao Y, Yan X, Wan Y. Hydrogen peroxide is a critical regulator of the hypoxia-induced alterations of store-operated Ca2+ entryinto rat pulmonary arterial smooth muscle cells. AM J PHYSIOL-LUNG C 2017 Jan 27:ajplung.00138.2016.

155. Hu J, Zhai C, Hu J, Li Z, Fei H, Wang Z, Fan W. MiR-23a inhibited IL-17-mediated proinflammatory mediators expression via targeting IKKα in articularchondrocytes. Int Immunopharmacol 2017 Feb;43:1-6.

156. Tong J, Mo QG, Ma BX, Ge LL, Zhou G, Wang YW. The protective effects of Cichorium glandulosum seed and cynarin against cyclophosphamide and itsmetabolite acrolein-induced hepatotoxicity in vivo and in vitro. Food Funct 2017 Jan 25;8(1):209-219.

157. Zuo D, Zhou Z, Wang H, Zhang T, Zang J, Yin F, Sun W, Chen J, Duan L, Xu J, Wang Z, Wang C, Lin B, Fu Z, Liao Y, Li S, Sun M, Hua Y, Zheng L, Cai Z. Alternol, a natural compound, exerts an anti-tumour effect on osteosarcoma by modulating of STAT3 andROS/MAPK signalling pathways. J Cell Mol Med 2017 Feb;21(2):208-221.

158. Wang J, Song W, Shen W, Yang X, Sun W, Qu S, Shang R, Ma B, Pu M, Tao K, Dou K, Li H. MicroRNA-200a Suppresses Cell Invasion and Migration by Directly Targeting GAB1 in HepatocellularCarcinoma. Oncol Res 2017 Jan 2;25(1):1-10.

159. Lan T, Ma W, Hong Z, Wu L, Chen X, Yuan Y. Long non-coding RNA small nucleolar RNA host gene 12 (SNHG12) promotes tumorigenesis and metastasis by targeting miR-199a/b-5p in hepatocellular carcinoma. J EXP CLIN CANC RES 2017 Jan 10;36(1):11.

160. Yang Y, Chen X, Min H, Song S, Zhang J, Fan S, Yi L, Wang H, Gu X, Ma Z, Gao Q. Persistent mitoKATP Activation Is Involved in the Isoflurane-induced Cytotoxicity. Mol Neurobiol 2017 Mar;54(2):1101-1110.

161. Huang L, Zhou B, Wu H, Zheng L, Zhao J. Effect of apatite formation of biphasic alcium phosphate ceramic (BCP) on osteoblastogenesis usingsimulated body fluid (SBF) with or without bovine serum albumin (BSA). MAT SCI ENG C-MATER 2017 Jan 1;70(Pt 2):955-961.

162. Guo J, Hao J, Jiang H, Jin J, Wu H, Jin Z, Li Z. Proteasome activator subunit 3 promotes pancreatic cancer growth via c-Myc-glycolysis signaling axis. Cancer Lett 2017 Feb 1;386:161-167.

163. Jing L, Song F, Liu Z, Li J, Wu B, Fu Z, Jiang J, Chen Z MLKL-PITPα signaling-mediated necroptosis contributes to cisplatin-triggered cell death in lung cancer A549 cells. Cancer Lett 2018 Feb 1;414:136-146.

164. Cao Y, Xu Y, Auchoybur ML, Chen W, He S, Qin W, Su C, Huang F, Qiu Z, Li L, Chen X Regulatory role of IKKα in myocardial ischemia/reperfusion injury by the determination of M1 versus M2 polarization of macrophages. J Mol Cell Cardiol 2018 Oct;123:1-12.

165. Si J, Ma Y, Bi JW, Xiong Y, Lv C, Li S, Wu N, Yang Y Shisa3 brakes resistance to EGFR-TKIs in lung adenocarcinoma by suppressing cancer stem cell properties. J EXP CLIN CANC RES 2019 Dec 4 38(1):481.

166. Cheng X, Pei P, Yu J, Zhang Q, Li D, Xie X, Wu J, Wang S, Zhang T F-box protein FBXO30 mediates retinoic acid receptor γ ubiquitination and regulates BMP signaling in neural tube defects. Cell Death Dis 2019 Jul 18 10(8):551.

167. Zhou H, Lian C, Wang T, Yang X, Xu C, Su D, Zheng S, Huang X, Liao Z, Zhou T, Qiu X, Chen Y, Gao B, Li Y, Wang X, You G, Fu Q, Gurnett C, Huang D, Su P MET mutation causes muscular dysplasia and arthrogryposis. EMBO Mol Med 2019 Mar 11(3). pii: e9709.

168. Wang P, Qi X, Xu G, Liu J, Guo J, Li X, Ma X, Sun H CCL28 promotes locomotor recovery after spinal cord injury via recruiting regulatory T cells. AGING-US 2019 Sep 26 11(18):7402-7415.

169. Xie Q, Wang Z, Zhou H, Yu Z, Huang Y, Sun H, Bi X, Wang Y, Shi W, Gu P, Fan X. The role of miR-135-modified adipose-derived mesenchymal stem cells in bone regeneration. Biomaterials 2016 Jan;75:279-94.

170. Ruoqin Wang, Yanchao Ma, Shenghua Zhan, Guangbo Zhang, Lei Cao, Xueguang Zhang, Tongguo Shi, Weichang Chen B7-H3 promotes colorectal cancer angiogenesis through activating the NF-κB pathway to induce VEGFA expression Cell Death Dis 2020 Jan 23;11(1):55.

171. Yingcheng Zheng, Guoguo Zhu, Jun Yan, Yinglian Tang, Song Han, Jun Yin, Biwen Peng, Xiaohua He, Wanhong Liu The Late Domain of Prototype Foamy Virus Gag Facilitates Autophagic Clearance of Stress Granules by Promoting Amphisome Formation J Virol 2020 Mar 17;94(7):e01719-19.

172. Ting-Ting Liu, Xu-Fei Du, Bai-Bing Zhang, Hua-Xing Zi, Yong Yan, Jiang-An Yin, Han Hou, Shan-Ye Gu, Qi Chen, Jiu-Lin Du Piezo1-Mediated Ca 2+ Activities Regulate Brain Vascular Pathfinding during Development Neuron 2020 Oct 14;108(1):180-192.e5.

173. Dian-Jia Liu, Fan Zhang, Yi Chen, Yi Jin, Yuan-Liang Zhang, Shu-Bei Chen, Yin-Yin Xie, Qiu-Hua Huang, Wei-Li Zhao, Lan Wang, Peng-Fei Xu, Zhu Chen, Sai-Juan Chen, Bing Li, Aijun Zhang, Xiao-Jian Sun setd2 knockout zebrafish is viable and fertile: differential and developmental stress-related requirements for Setd2 and histone H3K36 trimethylation in different vertebrate animals Cell Discov 2020 Oct 20;6:72.

174. Xujia Wu, Songhua Xiao, Maolei Zhang, Lixuan Yang, Jian Zhong, Bo Li, Fanying Li, Xin Xia, Xixi Li, Huangkai Zhou, Dawei Liu, Nunu Huang, Xuesong Yang, Feizhe Xiao, Nu Zhang A novel protein encoded by circular SMO RNA is essential for Hedgehog signaling activation and glioblastoma tumorigenicity Genome Biol 2021 Jan 14;22(1):33.

175. Zhenrui Pan, Yuanyuan Zhang, Jianhua Luo, Danyang Li, Yao Zhou, Liuqing He, Qi Yang, Min Dong, Liang Tao Functional analyses of epidemic Clostridioides difficile toxin B variants reveal their divergence in utilizing receptors and inducing pathology PLoS Pathog 2021 Jan 28;17(1):e1009197.

176. Gang Wang, Qikai Sun, Hai Zhu, Yihui Bi, Haixing Zhu, Aman Xu The stabilization of yes-associated protein by TGFβ-activated kinase 1 regulates the self-renewal and oncogenesis of gastric cancer stem cells J Cell Mol Med 2021 Jul;25(14):6584-6601.

177. Yeting Hu, Yucheng Qian, Jingsun Wei, Tian Jin, Xiangxing Kong, Hongfeng Cao, Kefeng Ding The Disulfiram/Copper Complex Induces Autophagic Cell Death in Colorectal Cancer by Targeting ULK1 Front Pharmacol 2021 Nov 23;12:752825.

178. Xunxun Wu, Lian Liu, Qiuling Zheng, Haiping Hao, Hui Ye, Ping Li, Hua Yang Protocatechuic aldehyde protects cardiomycoytes against ischemic injury via regulation of nuclear pyruvate kinase M2 Acta Pharm Sin B 2021 Nov;11(11):3553-3566.

179. Yueli Ni, Zhe Yang, Yannick Luther Agbana, Honggang Bai, Lianlin Wang, Lijuan Yang, Zihan Yi, Jing Cheng, Qiao Zhang, Yingmin Kuang, Yuechun Zhu Silent information regulator 2 promotes clear cell renal cell carcinoma progression through deacetylation and small ubiquitin-related modifier 1 modification of glucose 6-phosphate dehydrogenase Cancer Sci 2021 Oct;112(10):4075-4086.

180. Xing Jun Jiang, Yan Qing Wu, Rong Ma, Yan Min Chang, Lu Lu Li, Jia Hui Zhu, Gong Ping Liu, Gang Li PINK1 Alleviates Cognitive Impairments via Attenuating Pathological Tau Aggregation in a Mouse Model of Tauopathy Front Cell Dev Biol 2022 Jan 4;9:736267.

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