

台盼蓝染色细胞存活率检测试剂盒

产品编号	产品名称	包装
C0011	台盼蓝染色细胞存活率检测试剂盒	100次
C0011M	台盼蓝染色细胞存活率检测试剂盒	500次

产品简介:

- 碧云天生产的台盼蓝染色细胞存活率检测试剂盒(Trypan Blue Staining Cell Viability Assay Kit)，是利用正常的健康细胞能够排斥台盼蓝，而丧失细胞膜完整性的细胞可以被台盼蓝染色研制而成的细胞存活率检测试剂盒。严格来说，台盼蓝染色检测的是细胞膜的完整性，通常认为细胞膜丧失完整性，即可认为细胞已经死亡[1]。
- 台盼蓝(Trypan blue)也称台盼兰、锥虫蓝、曲利苯蓝，是一种四磺化阴离子亲水染料，常用于检测细胞膜的完整性与细胞存活率。
- 台盼蓝染色后，通过显微镜下直接计数或显微镜下拍照后计数，就可以对细胞存活率进行比较精确的定量。台盼蓝染色后的HeLa细胞请参考图1。

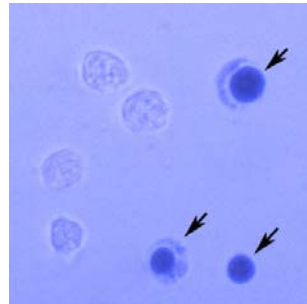


图1. 碧云天台盼蓝染色细胞存活率检测试剂盒(C0011)对HeLa细胞进行台盼蓝染色效果图。胰酶消化下来的HeLa细胞，1000×g离心1分钟，弃上清，用适量细胞重悬液重悬后，用等体积台盼蓝染色液(2X)染色。箭头所示为台盼蓝染色的死亡细胞。注：本HeLa细胞经过一定的细胞坏死诱导处理。实际检测效果会因实验条件、检测仪器等的不同而存在差异，图中数据仅供参考。

- 台盼蓝染色只需3-5分钟即可完成，并且操作非常简单。
- 按每个样品使用100μl台盼蓝染色液(2X)来计算，本试剂盒小包装足够检测100个细胞样品，中包装足够检测500个细胞样品。

包装清单:

产品编号	产品名称	包装
C0011-1	台盼蓝染色液(2X)	10ml
C0011-2	细胞重悬液	100ml
—	说明书	1份

产品编号	产品名称	包装
C0011M-1	台盼蓝染色液(2X)	50ml
C0011M-2	细胞重悬液	500ml
—	说明书	1份

保存条件:

4°C保存，一年有效。台盼蓝染色液(2X)室温保存，至少3个月有效。

注意事项:

- 本试剂盒提供的两种溶液都是无菌的，使用时最好在超净台内进行，避免细菌污染。
- 本产品中的台盼蓝染色液(2X)经过优化，通常在室温保存条件下不会出现沉淀，但如果长时间存放或保存温度过低，可能会出现少量颗粒状沉淀，可在37°C水浴约10分钟以充分溶解沉淀，沉淀完全溶解后即可正常使用。
- 台盼蓝对人体有毒，操作时请特别小心，并注意有效防护以避免直接接触人体或吸入体内。
- 本产品仅限于专业人员的科学研究用，不得用于临床诊断或治疗，不得用于食品或药品，不得存放于普通住宅内。
- 为了您的安全和健康，请穿实验服并戴一次性手套操作。

使用说明:

1. 收集细胞:

对于贴壁细胞先用胰酶或EDTA消化下细胞。对于悬浮细胞, 则可以直接收集细胞。把收集的细胞在1000-2000×g离心1分钟, 弃上清, 用1毫升或根据细胞的量用适当细胞重悬液重新悬起细胞。

2. 台盼蓝染色:

吸取100微升重悬的细胞到一塑料离心管内, 加入100微升台盼蓝染色液(2X), 轻轻混匀, 染色3分钟(染色3分钟时间已经足够, 染色时间可以更长一些, 但不宜超过10分钟)。

注: 对于重悬于细胞培养液中的细胞, 也可以直接加入等体积的台盼蓝染色液(2X)进行染色。

3. 计数:

吸取少量经过染色的细胞, 用血细胞计数板计数。通常如果要比较精确地进行定量, 每个细胞样品至少数500个细胞, 数出蓝色细胞和细胞总数。

细胞存活率=(细胞总数-蓝色细胞数)/细胞总数×100%

参考文献:

1. Kerschbaum HH, Tasa BA, Schürz M, Oberascher K, Bresgen N. Cell Physiol Biochem. 2021. 55(S1):171-184.

相关产品:

产品编号	产品名称	包装
C0011	台盼蓝染色细胞存活率检测试剂盒	100次/500次
C1305	动物组织活性检测试剂盒(台盼蓝法)	100ml/500ml
C1308	植物组织活性检测试剂盒(台盼蓝法)	100ml/500ml
C1313	台盼蓝染色液(2X, 细胞计数仪专用)	1ml/5ml/25ml

使用本产品的文献:

1. Li MX, Wang YR, Cao JM, Tian GZ, Zhao LH. To Explore the Double-labeling Method of Monitoring the GHRP Regulatory Function on [Ca²⁺]_i and NO on Real Time in Cardiomyocytes Under LSCM. J Med Res. 2007 Aug; 36(8):22-5.
2. Kang X, Chen J, Qin Q, Wang F, Wang Y, Lan T, Xu S, Wang F, Xia J, Ekberg H, Qi Z, Liu Z. Isatis tinctoria L. combined with co-stimulatory molecules blockade prolongs survival of cardiac allografts in alloantigen-primed mice. Transpl Immunol. 2010 Mar;23(1-2):34-9.
3. Huang Y, Yang M, Yang H, Zeng Z. Upregulation of the GRIM-19 gene suppresses invasion and metastasis of human gastric cancer SGC-7901 cell line. Exp Cell Res. 2010 May;316(13):2061-70.
4. Chang Y, Yang ST, Liu JH, Dong E, Wang Y, Cao A, Liu Y, Wang H. In vitro toxicity evaluation of graphene oxide on A549 cells. Toxicol Lett. 2011 Feb 5;200(3):201-10.
5. Wang F, Chen J, Shao W, Kang X, Xu S, Xia J, Dai H, Peng Y, Thorlacius H, Xing J, Qi Z. The Major Histocompatibility Complex (MHC) of the Secondary Transplant Tissue Donor Influences the Cross-Reactivity of Alloreactive Memory Cells. Scand J Immunol. 2011 Mar;73(3):190-7.
6. He XN, Su F, Lou ZZ, Jia WZ, Song YL, Chang HY, Wu YH, Lan J, He XY, Zhang Y. Ipr1 gene mediates RAW 264.7 macrophage cell line resistance to Mycobacterium bovis. Scand J Immunol. 2011 Nov;74(5):438-44.
7. Chen H, Ma N, Xia J, Liu J, Xu Z. β₂-Adrenergic receptor-induced transactivation of epidermal growth factor receptor and platelet-derived growth factor receptor via Src kinase promotes rat cardiomyocyte survival. Cell Biol Int. 2012 Mar 1;36(3):237-44.
8. Ruan J, Song H, Li C, Bao C, Fu H, Wang K, Ni J, Cui D. DiR-labeled Embryonic Stem Cells for Targeted Imaging of in vivo Gastric Cancer Cells. Theranostics. 2012 Jun;2(6):618-28.
9. Peng Y, Zheng Y, Zhang Y, Zhao J, Chang F, Lu T, Zhang R, Li Q, Hu X, Li N. Different effects of omega-3 fatty acids on the cell cycle in C2C12 myoblast proliferation. Mol Cell Biochem. 2012 Aug;367(1-2):165-73.
10. Yi S, Chen Y, Wen L, Yang L, Cui G. Downregulation of nucleoporin 88 and 214 induced by oridonin may protect OCIM2 acute erythroleukemia cells from apoptosis through regulation of nucleocytoplasmic transport of NF-κB. Int J Mol Med. 2012 Oct;30(4):877-83.
11. Wu L, Liu YY, Li ZX, Zhao Q, Wang X, Yu Y, Wang YY, Wang YQ, Luo F. Anti-tumor effects of penfluridol through dysregulation of cholesterol homeostasis. Asian Pac J Cancer Prev. 2014;15(1):489-94.
12. Su J, Cheng H, Zhang D, Wang M, Xie C, Hu Y, Chang HC, Li Q. Synergistic effects of 5-fluorouracil and gambogic acid on A549 cells: activation of cell death caused by apoptotic and necroptotic mechanisms via the ROS-mitochondria pathway. Biol Pharm Bull. 2014;37(8):1259-68.
13. Zeng C, Tang K, He L, Peng W, Ding L, Fang D, Zhang Y. Effects of glycerol on apoptotic signaling pathways during boar spermatozoa cryopreservation. Cryobiology. 2014 Jun;68(3):395-404.
14. Zhang X, Jiang A, Ma Z, Xiong Y, Dou J, Zhou G, Qin M, Wang J. Design of signal peptide bombyxin and its effect on secretory expression efficiency and levels of Helicobacter pylori urease subunit B in silkworm cells and larvae. Brazilian Archives of Biology and Technology. 2015;58(3):319-325.
15. Deng Y, Ye J, Luo Q, Huang Z, Peng Y, Xiong G, Guo Y, Jiang H, Li J. Low-Density Granulocytes Are Elevated in Mycobacterial Infection and Associated with the Severity of Tuberculosis. PLoS One. 2016 Apr 13;11(4):e0153567.
16. Gao T, Li L, Wang B, Zhi J, Xiang Y, Li G. Dynamic Electrochemical Control of Cell Capture-and-Release Based on Redox-Controlled Host-Guest Interactions. Anal Chem. 2016 Oct 18;88(20):9996-10001.
17. Yang M, Pi H, Li M, Xu S, Zhang L, Xie J, Tian L, Tu M, He M, Lu Y, Yu Z, Zhou Z. Autophagy Induction Contributes to Cadmium Toxicity in Mesenchymal Stem Cells via AMPK/FOXO3a/BECN1 Signaling. Toxicol Sci. 2016 Nov;154(1):101-114.
18. Qian XL, Zhang J, Li PZ, Lang RG, Li WD, Sun H, Liu FF, Guo XJ, Gu F, Fu L. Dasatinib inhibits c-src phosphorylation and prevents the proliferation of Triple-Negative Breast Cancer (TNBC) cells which overexpress Syndecan-Binding Protein (SDCBP). PLoS One. 2017 Jan 31;12(1):e0171169.
19. Yi Y, Chen D, Ao J, Sun S, Wu M, Li X, Bergholz J, Zhang Y, Xiao ZX.

- Metformin Promotes AMP-activated Protein Kinase-independent Suppression of Δ Np63 α Protein Expression and Inhibits Cancer Cell Viability. *J Biol Chem*. 2017 Mar 31;292(13):5253-5261.
20. Huang Y, Wang XX, Sun DD, Zhang ZX, Yang WW, Shao T, Han H, Zhang EF, Pu ZS, Hou ZX, Dong HL, Xiong LZ, Hou LC. Sub-anesthesia Dose of Isoflurane in 60% Oxygen Reduces Inflammatory Responses in Experimental Sepsis Models. *CHINESE MED J-PEKING*. 2017 Apr 5;130(7):840-853.
 21. Liu L, Liu S, Duan Q, Chen L, Wu T, Qian H, Yang S, Xin D, He Z, Guo Y. MicroRNA-142-5p promotes cell growth and migration in renal cell carcinoma by targeting BTG3. *Am J Transl Res*. 2017 May 15;9(5):2394-2402.
 22. Ma Z, Zhang Y, Su J, Li X, Yang S, Qiao W, Suo C, Lei Z. Distribution of the pig gastrin-releasing peptide receptor and the effect of GRP on porcine Leydig cells. *Peptides*. 2017 Sep 28. pii:S0196-9781(17)30298-X.
 23. Li J, Yang YL, Li LZ, Zhang L, Liu Q, Liu K, Li P, Liu B, Qi LW. Succinate accumulation impairs cardiac pyruvate dehydrogenase activity through GRP91-dependent and independent signaling pathways: Therapeutic effects of ginsenoside Rb1. *BBA-BIOMEMBRANES*. 2017 Nov;1863(11):2835-2847.
 24. Wang Y, Kong D. Knockdown of lncRNA MEG3 inhibits viability, migration, and invasion and promotes apoptosis by sponging miR-127 in osteosarcoma cell. *J Cell Biochem*. 2018 Jan;119(1):669-679.
 25. Li Y, Shan Z, Yang B, Yang D, Men C, Cui Y, Wu J. LncRNA HULC promotes epithelial and smooth-muscle-like differentiation of adipose-derived stem cells by upregulation of BMP9. *Pharmazie*. 2018 Jan 2;73(1):49-55.
 26. Miao C, Cao H, Zhang Y, Guo X, Wang Z, Wang J. LncRNA DIGIT Accelerates Tube Formation of Vascular Endothelial Cells by Sponging miR-134. *Int Heart J*. 2018 Sep 26;59(5):1086-1095.
 27. Wu G, Zhang Z, Chen X, Yu Q, Ma X, Liu L. Chemosensitization effect of cerium oxide nanosheets by suppressing drug detoxification and efflux. *ECOTOX ENVIRON SAFE*. 2019 Jan 15;167:301-308.
 28. Wang SJ, Zhao JK, Ren S, Sun WW, Zhang WJ, Zhang JN. Wogonin affects proliferation and the energy metabolism of SGC-7901 and A549 cells. *Exp Ther Med*. 2019 Jan;17(1):911-918.
 29. Ying Meng, Feng Yu. Long Noncoding RNA FAM3D-AS1 Inhibits Development of Colorectal Cancer Through NF- κ B Signaling Pathway. *BIOSCIENCE REP*. 2019 Jul 5;39(7):BSR20190724.
 30. Jing H, Liu L, Jia Y, Yao H, Ma F. Overexpression of the long non-coding RNA Oprm1 alleviates apoptosis from cerebral ischemia-reperfusion injury through the Oprm1/miR-155/GATA3 axis. *ARTIF CELL NANOMED B*. 2019 Dec;47(1):2431-2439.
 31. Wen-Xuan Li, Fei Wang, Yun-Qian Zhu, Li-Mei Zhang, Zhen-Hua Zhang, Xiao-Ming Wang. Inhibitors of nitric oxide synthase can reduce extracellular traps from neutrophils in asthmatic children in vitro. *PEDIATR PULM*. 2020 Jan;55(1):68-75.
 32. Zhao Y, Ai Y. Overexpression of lncRNA Gm15621 alleviates apoptosis and inflammation response resulting from sevoflurane treatment through inhibiting miR-133a/Sox4. *J Cell Physiol*. 2020 Feb;235(2):957-965.
 33. Zhiguo Long, Guangjia Feng, Na Zhao, Lei Wu, Hongbo Zhu. Isoferulic acid inhibits human leukemia cell growth through induction of G2/M-phase arrest and inhibition of Akt/mTOR signaling. *Mol Med Rep*. 2020 Mar;21(3):1035-1042.
 34. Cui L, Wang H, Lin J, Wang Y, Dong J, Li J, Li J. Progesterone inhibits inflammatory response in E.coli- or LPS-Stimulated bovine endometrial epithelial cells by NF- κ B and MAPK pathways. *Dev Comp Immunol*. 2020 Apr;105:103568.
 35. Qiaomei Dai, Yaozhang Li, Meiqiao Wang, Yang Li, Ji Li. TLR2 and TLR4 are involved in the treatment of rheumatoid arthritis synovial fibroblasts with a medicated serum of asarinin through inhibition of Th1/Th17 cytokines. *Exp Ther Med*. 2020 Apr;19(4):3009-3016.
 36. Yuebo Chen, Yu Zhang, Guangyao Ye, Chaoux Sheng, Lingsi Kong, Liyong Yuan. Knockdown of lncRNA PCAI protects against cognitive decline induced by hippocampal neuroinflammation via regulating SUZ12. *Life Sci*. 2020 Jul 15;253:117626.
 37. Liping Liu, Shuyun Wang, Haiyan Xing, Yuemei Sun, Juan Ding, Ning He. Bulleyaconitine A inhibits the lung inflammation and airway remodeling through restoring Th1/Th2 balance in asthmatic model mice. *BIOSCI BIOTECH BIOCH*. 2020 Jul;84(7):1409-1417.
 38. Le Zhang, Minkai Cao, Zhiwei Yu, Siliang Xu, Liang Ju, Jun Qian, Tianyu Li, Jianjuan Xu, Wei Qian, Jian Zhou, Zhengying Li. The restoration of Wnt/ β -catenin signalling activity by a tuna backbone-derived peptide ameliorates hypoxia-induced cardiomyocyte injury. *Am J Transl Res*. 2020 Sep 15;12(9):5221-5236.
 39. Linxin Zhu, Jiankun Zang, Bing Liu, Guocheng Yu, Lili Hao, Lian Liu, Jingxiang Zhong. Oxidative stress-induced RAC autophagy can improve the HUVEC functions by releasing exosomes. *J Cell Physiol*. 2020 Oct;235(10):7392-7409.
 40. Jiangqing Huang, Shengcen Zhang, Shuyu Zhang, Zhichang Zhao, Yingping Cao, Min Chen, Bin Li. A Comparative Study of Fluoroquinolone-Resistant Escherichia coli Lineages Portrays Indistinguishable Pathogenicity- and Survivability-Associated Phenotypic Characteristics Between ST1193 and ST131. *Infect Drug Resist*. 2020 Nov 20;13:4167-4175.
 41. Jia Song, Yachong Liu, Furong Liu, Lu Zhang, Ganxun Li, Chaoyi Yuan, Chengpeng Yu, Xun Lu, Qiumeng Liu, Xiaoping Chen, Huifang Liang, Zeyang Ding, Bixiang Zhang. The 14-3-3 σ protein promotes HCC anoikis resistance by inhibiting EGFR degradation and thereby activating the EGFR-dependent ERK1/2 signaling pathway. *Theranostics*. 2021 Jan 1;11(3):996-1015.
 42. Xianxian Jia, Bo Wu, Jinhui Huang, Lin Fan, Miao Yang, Wei Xu. YAP and Wnt3a independently promote AECIIs proliferation and differentiation by increasing nuclear β -catenin expression in experimental bronchopulmonary dysplasia. *Int J Mol Med*. 2021 Jan;47(1):195-206.
 43. Lidong Wang, Yanyan Zhang, Teng Chen, Lijuan Mi, Xuefei Sun, Xintao Zhou, Faming Miao, Shoufeng Zhang, Ye Liu, Rongliang Hu. The Mink Coronavirus Capsid Subunit Expressed by Recombinant Baculovirus Protects Minks against Refractory Diarrhea in Field. *Viruses*. 2021 Apr 1;13(4):606.
 44. Mengfei Yao, Yaqian Wu, Yanan Cao, Haijing Liu, Ningning Ma, Yijie Chai, Shuang Zhang, Hong Zhang, Lin Nong, Li Liang, Bo Zhang. Autophagy-Mediated Clearance of Free Genomic DNA in the Cytoplasm Protects the Growth and Survival of Cancer Cells. *Front Oncol*. 2021 May 26;11:667920.
 45. Wuxue Peng, Xi Liu, Changhong Tan, Wen Zhou, Jin Jiang, Xuan Zhou, Juncong Du, Lijuan Mo, Lifan Chen. Zinc- α 2-glycoprotein relieved seizure-Induced neuronal glucose uptake impairment via insulin-like growth factor 1 receptor-regulated glucose transporter 3 expression. *J Neurochem*. 2021 May;157(3):695-709.
 46. Yao-Shun Yang, Xi-Zheng Jia, Qian-Yun Lu, Sun-Li Cai, Xue-Ting Huang, Shu-Hua Yang, Chris Wood, Yue-Hong Wang, Jiao-Jiao Zhou, Yi-Ding Chen, Jin-Shu Yang, Wei-Jun Yang. Exosomal DEK removes chemoradiotherapy resistance by triggering quiescence exit of breast cancer stem cells. *Oncogene*. 2022 Apr;41(18):2624-2637.
 47. Guangyong Yang, Jie Yang, Qiwei Zhang, Wenfeng Wang, Liping Feng, Li Zhao, Bang An, Qiannan Wang, Chaozu He, Hongli Luo. The Effector Protein CgNLP1 of Colletotrichum gloeosporioides Affects

- Invasion and Disrupts Nuclear Localization of Necrosis-Induced Transcription Factor HbMYB8-Like to Suppress Plant Defense Signalin. *Front Microbiol.* 2022 Jun 13;13:911479.
48. Xuexia Li, Yingfei Zeng, Shengnan Guo, Chen Chen, Lin Liu, Qianfeng Xia. Glycometabolism change during *Burkholderia pseudomallei* infection in RAW264.7 cells by proteomic analysis. *Sci Rep.* 2022 Jul 22;12(1):12560.
49. Xiaofei Wang, Penghua Zhang, Ke Deng. MYC Promotes LDHA Expression through MicroRNA-122-5p to Potentiate Glycolysis in Hepatocellular Carcinoma. *Anal Cell Pathol (Amst).* 2022 Aug 18;2022:1435173.
50. Xiaoyong Chen, Ziwei Li, Shuaiwei Wang, Guangzhi Tong, Keyuan Chen, Yan Zhao. Proteomic analysis reveals zinc-finger CCHC-type containing protein 3 as a factor inhibiting virus infection by promoting innate signaling. *Virus Res.* 2022 Oct 2;319:198876.
51. Ming Yue Zhu, Zhi Sun Gong, Hai Peng Feng, Qiu Yue Zhang, Kun Liu, Bo Lin, Min Ni Zhang, Hai Feng Lin, Meng Sen Li. Vincosamide Has a Function for Inhibiting Malignant Behaviors of Hepatocellular Carcinoma Cells. *World J Oncol.* 2022 Oct;13(5):272-288.
52. YuSheng Zhang, YaNan Liu, Zi Teng, ZeLin Wang, Peng Zhu, ZhiXin Wang, FuJun Liu, XueXia Liu. Human umbilical cord mesenchymal stem cells (hUC-MSCs) alleviate paclitaxel-induced spermatogenesis defects and maintain male fertility. *Biol Res.* 2023 Aug 13;56(1):47.
53. Ting Jiang, Chengxiu Zhang, Xinjing Cao, Yingpu Tian, Han Cai, Shuangbo Kong, Jinhua Lu, Haibin Wang, Zhongxian Lu. EZH1/2 plays critical roles in oocyte meiosis prophase I in mice. *Biol Res.* 2024 Nov 8;57(1):83.

Version 2025.04.03