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BCIP/NBT 碱性磷酸酶显色试剂盒

产品简介：

BCIP 和 NBT 是碱性磷酸酶(Alkaline Phosphatase ,ALP)的常用底物，在 ALP 的催化下，BCIP 会被水解产生强反应性的产物，该产物会和 NBT 反应，形成不溶性的深蓝色至蓝紫色的 NBT-formazan。

Leagene BCIP/NBT 碱性磷酸酶显色试剂盒(BCIP/NBT ALP Color Development Kit)可用于细胞或组织的 ALP 显色包括诱导多功能干细胞 iPS 的鉴定，也可用于 Western 等结合有 ALP 的膜的显色检测或者细胞或组织内源性的 ALP 显色。该试剂盒仅用于科研领域，不适用于临床诊断或其他用途。

产品组成：

编号 / 名称	PW0078 50ml	PW0078 100ml	Storage
试剂(A): ALP Color Buffer	50ml	100ml	RT
试剂(B): BCIP Solution(300×)	175μl	350μl	4℃ 避光
试剂(C): NBT Solution(150×)	350μl	700μl	4℃ 避光
使用说明书	1 份		

自备材料：

1、洗涤液、(可选)中性红染色液

操作步骤(仅供参考)：

1、按照如下比例依次加入各溶液，混匀后即配制成 BCIP/NBT 染色工作液：

ALP Color Buffer	3ml	10ml
BCIP Solution(300×)	10μl	33μl
NBT Solution(150×)	20μl	67μl
BCIP/NBT 染色工作液(总量)	3.03ml	10.1ml

2、对于组织切片或细胞样品或膜，在与碱性磷酸酶标记的抗体或其它形式的探针孵育后，用洗涤液洗涤 3～5 次，每次 3～5min；对于检测内源性碱性磷酸酶的组织或细胞样品，固定液固定后用洗涤液洗涤 3～5 次，每次 3～5min。

3、洗涤完毕后，去除洗涤液。

4、加入适量 BCIP/NBT 染色工作液，确保能充分覆盖样品。

5、室温避光孵育 5～30min 或更长时间(可长达 24 小时)，直至显色至预期深浅。

6、去除 BCIP/NBT 染色工作液，用蒸馏水洗涤 1～2 次即可终止显色反应。

7、对于组织切片或细胞样品，显色反应终止后，如有必要可用中性红染色液染色，以便于观察；对于膜，显色反应终止后，可以室温晾干避光保存。

注意事项：

1、 BCIP 对人体有刺激性，NBT 对人体有害，请注意适当防护。

2、 操作过程中，尽量避免强光照射。

3、 为了您的安全和健康，请穿实验服并戴一次性手套操作。

4、 试剂开封后请尽快使用，以防影响后续实验效果。

有效期：12 个月有效。低温运输，4℃保存。

相关产品：

产品编号	产品名称
DA0071	中性红染色液(0.5%)
DC0032	Masson 三色染色液
PE0103	Acr-Bis(30%,29:1)
PW0040	Western blot 一抗稀释液
PW0053	Western 抗体洗脱液(碱性)
PW0059	Western 洗涤液
PW0061	通用定影液
TC0713	葡萄糖检测试剂盒(GOD-POD 比色法)

文献引用：

1、 Qin Danlei,Zhao Yifan,Cheng Rui,et al.Mussel-inspired immunomodulatory and osteoinductive dual-functional hydroxyapatite nanoplatform for promoting bone regeneration.JOURNAL OF NANOBIOTECHNOLOGY.June 2024.10.1186/s12951-024-02593-3.(IF 10.6)

2、 Wen Song,Xin Song,Chuanxu Yang,et al.Chitosan/siRNA functionalized titanium surface via a layer-by-layer approach for in vitro sustained gene silencing and osteogenic promotion.International Journal of Nanomedicine.February 2023.10.2147/IJN.S76513.(IF 8)

3、 Yan-ting Zhong,Hong-bo Liao,Zhi-qiang Ye,et al.Eurycomanone stimulates bone mineralization in zebrafish larvae and promotes osteogenic differentiation of mesenchymal stem cells by upregulating AKT/GSK-3β/β-catenin signaling.Journal of Orthopaedic Translation.June 2023.10.1016/j.jot.2023.05.006.(IF 6.6)

4、 Kui Zhang,Yan Liu,Zhenrui Zhao,et al.Magnesium-Doped Nano-Hydroxyapatite/Polyvinyl Alcohol/Chitosan Composite Hydrogel: Preparation and Characterization.International Journal of Nanomedicine.January 2024.10.2147/IJN.S434060.(IF 6.6)

5、 Yafei Zheng,Lingzhou Zhao,Ying Li,et al.Nanostructure Mediated Piezoelectric Effect of Tetragonal BaTiO3 Coatings on Bone Mesenchymal Stem Cell Shape and Osteogenic Differentiation.INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES.February 2023.10.3390/ijms24044051.(IF 5.6)

6、 Hongbo Liao,Yanting Zhong,Donghua Zhou,et al.Quassinoids from Eurycoma longifolia and their bone formation evaluation in zebrafish,C3H10 cells and silico.CHEMICO-BIOLOGICAL INTERACTIONS.September 2022.10.1016/j.cbi.2022.110140.(IF 5.168)

7、 Ou Minglin,Li Chunhong,Tang Donge,et al.Genotyping,generation and proteomic profiling of the first human autosomal dominant osteopetrosis type II-specific induced pluripotent stem cells.Stem Cell Research & Therapy.August 2019.10.1186/s13287-019-1369-8.(IF 4.627)

8、 Jinjin Wang,Fanhui Meng,Wen Song,et al.Nanostructured titanium regulates osseointegration via influencing macrophage polarization in the osteogenic environment.International Journal of Nanomedicine.July 2018.10.2147/IJN.S163956.(IF 4.37)

9、 Zhou Bin,Peng Kun,Wang Guoqiang,et al.Silencing Proteasome 26S Subunit ATPase 2 (PSMC2) Protects the Osteogenic Differentiation In Vitro and Osteogenesis In Vivo.CALCIFIED TISSUE INTERNATIONAL.February 2021.10.1007/s00223-021-00819-2.(IF 4.333)

10、Xu Wen-Ning,Zheng Huo-Liang,Yang Run-Ze,et al.HIF-1α Regulates Glucocorticoid-Induced Osteoporosis Through PDK1/AKT/mTOR Signaling Pathway.Frontiers in Endocrinology.January 2020.10.3389/fendo.2019.00922.(IF 3.644)

11、Wen-bo Kang,Ya-ting Deng,Dong-sheng Wang,et al.Osteoprotective effects of estrogen membrane receptor GPR30 in ovariectomized rats.JOURNAL OF STEROID BIOCHEMISTRY AND MOLECULAR BIOLOGY.July 2015.10.1016/j.jsbmb.2015.07.002.(IF 3.628)

12、Gui-Xun Shi,Xin-Feng Zheng,Chao Zhu,et al.Evidence of the Role of R-Spondin 1 and Its Receptor Lgr4 in the Transmission of Mechanical Stimuli to Biological Signals for Bone Formation.INTERNATIONAL JOURNAL OF MOLECULAR SCIENCES.March 2017.10.3390/ijms18030564.(IF 3.226)

13、Xin Huang,Jianfei Liang,Ye Gao,et al.Ckip-1 regulates C3H10T1/2 mesenchymal cell proliferation and osteogenic differentiation via Lrp5.Experimental and Therapeutic Medicine.February 2021.10.3892/etm.2021.9773.(IF 2.447)

14、Rui-Xiong Huang,Jun Tao,et al.Nicotinamide mononucleotide attenuates glucocorticoid-induced osteogenic inhibition by regulating the SIRT1/PGC-1α signaling pathway.Molecular Medicine Reports.May 2020.10.3892/mmr.2020.11116.(IF 2.1)

15、Kaixiu Fang,Wen Song,Lifeng Wang,et al.Semaphorin 3A-modified adipose-derived stem cell sheet may improve osseointegration in a type 2 diabetes mellitus rat model.Molecular Medicine Reports.July 2016.10.3892/mmr.2016.5568.(IF 1.559)

16、Li K.Q.,Jia S.S.,Ma M.,et al.Effects of fluoride on proliferation and mineralization in periodontal ligament cells in vitro.BRAZILIAN JOURNAL OF MEDICAL AND BIOLOGICAL RESEARCH.July 2016.10.1590/1414-431X20165291.(IF 1.146)

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