

Product Information

5-Bromo-4-chloro-3-indolyl phosphate *p*-toluidine salt

Tablets

B0274

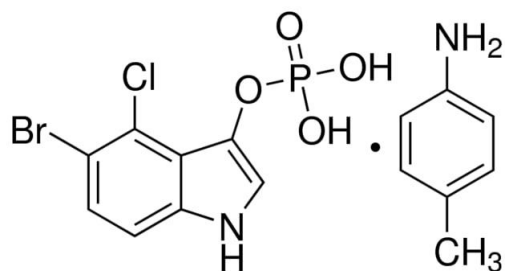
Product Description

Synonyms: BCIP® *p*-toluidine salt, X-phosphate *p*-toluidine salt (5-Bromo-4-chloro-3-indolyl phosphate *p*-toluidine component)

CAS Registry Number: 6578-06-9 (BCIP® component)

Molecular Formula: C₈H₆BrClNO₄P • C₇H₉N (BCIP® component)

Molecular Weight: 433.62 (BCIP® component)



5-Bromo-4-chloro-3-indolyl phosphate (BCIP®) *p*-toluidine salt is the substrate of choice for use with alkaline phosphatase in immunoblotting and immunohistological staining procedures.¹ High assay sensitivity is accomplished via amplification when BCIP® is used in conjunction with nitro blue tetrazolium (NBT) tablets (Cat. No. N5514). This substrate system produces an insoluble end product that is blue in color and can be observed visually.^{2,3}

Several dissertations have cited use of product B0274 in their research protocols.⁴⁻⁷

Reagent

Each tablet contains 25 mg of substrate. The tablets are packaged either as 10 tablets (10TAB) or 25 tablets (25TAB) per bottle.

Precautions and Disclaimer

This product is for R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store tablets at -20 °C. Protect from heat, light, and moisture. Allow tablets to reach room temperature before use.

Preparation Instructions

BCIP® Stock Solution: Dissolving one 25 mg tablet in 1 mL of DMF (dimethylformamide).

NBT Stock Solution: Dissolve one NBT tablet (10 mg substrate content, Cat. No. N5514) in 1 mL of water.

Substrate Buffer (0.1 M Tris, pH 9.5, with 100 mM NaCl, and 5 mM MgCl₂):

- Combine 12.11 g of Tris Base (such as Cat. No. T1503), 5.84 g of NaCl (Cat. No. S9625), and 1 g of MgCl₂ (Cat. No. M0250).
- Adjust pH to 9.5 with HCl.
- Then bring the volume to 1 L.

Substrate Solution:

- Add 330 µL of NBT Stock Solution to 10 mL of Substrate Buffer. Mix.
- Then add 33 µL of BCIP Stock Solution. Mix again.

MERCK

References

1. Meads, M.B., and Medveczky, P.G., "Application of Western Blotting to Diagnosis of Viral Infections", in *Clinical Virology Manual*, Fourth Edition (Specter, S. *et al.*, eds.). ASM Press (Washington, DC), pp. 150-155 (2009).
2. Blake, M.S. *et al.*, *Anal. Biochem.*, **136(1)**, 175-179 (1984).
3. Horowitz, J.P. *et al.*, *J. Med. Chem.*, **9(3)**, 447 (1966).
4. O'Driscoll, Lorraine, "Investigation of Mechanisms of Multiple Drug Resistance using Polymerase Chain Reaction". Dublin City University, Ph.D. dissertation, p. 104 (1994).
5. Huss-Marp, Johannes, "Untersuchung zur Bedeutung der relativen Luftfeuchte für die Allergenfreisetzung aus Pollen" ("Investigation of the importance of relative humidity for allergen release from pollen"). Technischen Universität München, Dr. med. dissertation, pp. 27, 41, 42 (2000).
6. Lindy, Otso, "Inflammation and tissue destruction in arthritides and periodontal disease". University of Helsinki, Ph.D. dissertation, p. 36 (2008).
7. Büller, Nikè Vittoria Justitia Anna, "Intestinal Hedgehog Signaling in tumors and inflammation". Universiteit van Amsterdam, Ph.D. dissertation, p. 50 (2015).

Notice

We provide information and advice to our customers on application technologies and regulatory matters to the best of our knowledge and ability, but without obligation or liability. Existing laws and regulations are to be observed in all cases by our customers. This also applies in respect to any rights of third parties. Our information and advice do not relieve our customers of their own responsibility for checking the suitability of our products for the envisaged purpose.

The information in this document is subject to change without notice and should not be construed as a commitment by the manufacturing or selling entity, or an affiliate. We assume no responsibility for any errors that may appear in this document.

Technical Assistance

Visit the tech service page at [SigmaAldrich.com/techservice](https://www.sigmaaldrich.com/techservice).

Terms and Conditions of Sale

Warranty, use restrictions, and other conditions of sale may be found at [SigmaAldrich.com/terms](https://www.sigmaaldrich.com/terms).

Contact Information

For the location of the office nearest you, go to [SigmaAldrich.com/offices](https://www.sigmaaldrich.com/offices).

The life science business of Merck operates as MilliporeSigma in the U.S. and Canada.

Merck and Sigma-Aldrich are trademarks of Merck KGaA, Darmstadt, Germany or its affiliates. All other trademarks are the property of their respective owners. Detailed information on trademarks is available via publicly accessible resources.

© 2009-2023 Merck KGaA, Darmstadt, Germany and/or its affiliates. All Rights Reserved.
B0274dat Rev 02/23 RBG,GCY,MAM

The Merck logo, consisting of the word "MERCK" in a bold, red, sans-serif font.