

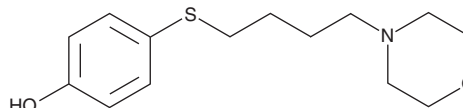
PRODUCT INFORMATION



MoTP

Item No. 15204

CAS Registry No.: 57055-82-0
Formal Name: 4-[[4-(4-morpholinyl)butyl]thio]-phenol
Synonyms: 4-(4-Morpholinylbutylthio)phenol
MF: C₁₄H₂₁NO₂S
FW: 267.4
Purity: ≥98%
UV/Vis.: λ_{max}: 229, 257 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

MoTP is supplied as a crystalline solid. A stock solution may be made by dissolving the MoTP in the solvent of choice, which should be purged with an inert gas. MoTP is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of MoTP in these solvents is approximately 0.3, 25, and 33 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of MoTP can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of MoTP in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

MoTP, known more formally as 4-(4-morpholinobutylthio)phenol, is used to ablate larval melanocytes in zebrafish in order to study melanocyte regeneration.^{1,2} MoTP is converted to a cytotoxin in cells with high tyrosinase activity, which in the zebrafish embryo are limited to melanoblasts and newly formed melanocytes.³ The wash-out of MoTP allows regeneration through the proliferation of melanocyte stem cells.^{2,3}

References

1. Yang, C.T. and Johnson, S.L. Small molecule-induced ablation and subsequent regeneration of larval zebrafish melanocytes. *Development* **133**(18), 3563-3573 (2006).
2. Yang, C.T., Hinds, A.E., Hultman, K.A., *et al.* Mutations in *gfpt1* and *skiv2l2* cause distinct stage-specific defects in larval melanocyte regeneration in zebrafish. *PLoS Genetics* **3**(6), e88 (2007).
3. Hultman, K.A., Budi, E.H., Teasley, D.C., *et al.* Defects in ErbB-dependent establishment of adult melanocyte stem cells reveal independent origins for embryonic and regeneration melanocytes. *PLoS Genetics* **5**(7), e1000544 (2009).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 01/11/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM