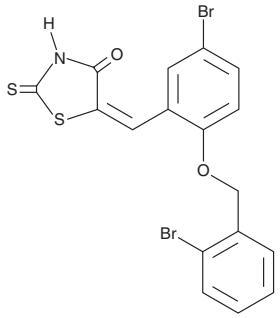
PRODUCT INFORMATION

PRL-3 Inhibitor

Item No. 18719

CAS Registry No.:	893449-38-2
Formal Name:	5-[[5-bromo-2-[(2-bromophenyl) methoxy]phenyl]methylene]-2-thioxo-4-thiazolidinone
Synonyms:	BR-1, P0108, Phosphatase of Regenerating Liver 3 Inhibitor, PTP4A3 Inhibitor
MF:	$C_{17}H_{11}Br_2NO_2S_2$
FW:	485.2
Purity:	≥95%
UV/Vis.:	λ_{max}: 273, 384 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

PRL-3 inhibitor is supplied as a crystalline solid. A stock solution may be made by dissolving the PRL-3 inhibitor in the solvent of choice, which should be purged with an inert gas. PRL-3 inhibitor is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of PRL-3 inhibitor in these solvents is approximately 16 mg/ml.

PRL-3 inhibitor is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, PRL-3 inhibitor should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. PRL-3 inhibitor has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Phosphatase of regenerating liver 3 (PRL-3; also known as PTP4A3) plays critical roles in cell proliferation, motility, and invasion, and thus contributes to cancer metastasis. PRL-3 inhibitor is a cell-permeable benzylidene rhodamine that inhibits PRL-3 (IC_{50} = 900 nM for human PRL-3 *in vitro*), with minimal activity against other phosphatases.[1,2] It reduces the invasion of mouse melanoma B16F10 cells in a cell-based assay.[1] PRL-3 inhibitor has been used to elucidate the actions of this enzyme, demonstrating that it dephosphorylates Tyr^{783} on integrin β1 and modulates VEGF-mediated endothelial cell migration.[3,4] It dose-dependently inhibits growth and triggers apoptosis in cancer cell lines.[5,6]

References

1. Ahn, J.H., Kim, S.J., Park, W.S., *et al. Bioorg. Med. Chem. Lett.* **16(11)**, 2996-2999 (2006).
2. Min, G., Lee, S.K., Kim, H.N., *et al. Bioorg. Med. Chem. Lett.* **23(13)**, 3769-3774 (2013).
3. Tian, W., Qu, L., Meng, L., *et al. BMC Biochem.* **13(22)**, (2012).
4. Zimmerman, M.W., McQueeney, K.E., Isenberg, J.S., *et al.* J. Biol. Chem. **289(9)**, 5904-5913 (2014).
5. Ooki, A., Yamashita, K., Kikuchi, S., *et al. BMC Cancer* **11(122)**, (2011).
6. Zhou, J., Bi, C., Chng, W.-J., *et al. PLoS One* **6(5)**, (2011).

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