

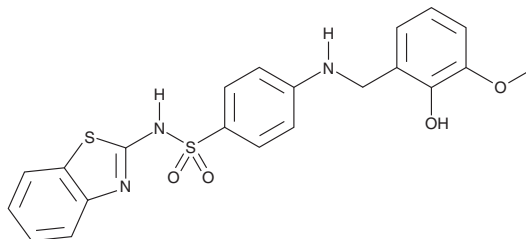
PRODUCT INFORMATION



ML-355

Item No. 18537

CAS Registry No.: 1532593-30-8
Formal Name: N-2-benzothiazolyl-4-[[[(2-hydroxy-3-methoxyphenyl)methyl]amino]benzenesulfonamide
MF: C₂₁H₁₉N₃O₄S₂
FW: 441.5
Purity: ≥95%
UV/Vis.: λ_{max}: 300 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

ML-355 is supplied as a crystalline solid. A stock solution may be made by dissolving the ML-355 in the solvent of choice which should be purged with an inert gas. ML-355 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of ML-355 in these solvents is approximately 1 mg/ml.

ML-355 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ML-355 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. ML-355 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

Platelet-type 12-lipoxygenase (12-LO; Item No. 10341) catalyzes the formation of 12-HpETE (Item No. 44570) from arachidonic acid (Item No. 90010).¹ It has been found to be expressed in various tumor cells as well as pancreatic islets and can be activated by inflammatory cytokines.² It has also been implicated in the modulation of hemostasis and thrombosis through its role in regulating platelet function.² ML-355 is a selective inhibitor of 12-LO with an IC₅₀ value of 0.34 μM.² It demonstrates greatly reduced potency for 15-LO-1, 15-LO-2, and 5-LO (IC₅₀s = 9.7, >100, and >100 μM) and no inhibition of COX-1 and -2.² In cell-based assays, ML-355 has been shown to decrease calcium mobilization and thrombin receptor PAR4-induced platelet aggregation in patient-derived human platelets and to significantly inhibit arachidonic acid and calcium- ionophore-induced 12-HpETE synthesis in mouse BTC3 cells and human islets.²

References

1. Chen, X.-S., Kurre, U., Jenkins, N.A., *et al.* cDNA cloning, expression, mutagenesis of C-terminal isoleucine, genomic structure, and chromosomal localizations of murine 12-lipoxygenases. *J. Biol. Chem.* **269**(19), 13979-13987 (1994).
2. Luci, D.K., Jameson, J.B., II, Yasgar, A., *et al.* Synthesis and structure-activity relationship studies of 4-((2-hydroxy-3-methoxybenzyl)amino)benzenesulfonamide derivatives as potent and selective inhibitors of 12-lipoxygenase. *J. Med. Chem.* **57**(2), 495-506 (2014).

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.

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