

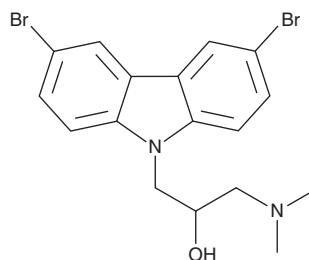
PRODUCT INFORMATION



Wiskostatin

Item No. 15047

CAS Registry No.: 253449-04-6
Formal Name: 3,6-dibromo- α -[(dimethylamino)methyl]-9H-carbazole-9-ethanol
MF: C₁₇H₁₈Br₂N₂O
FW: 426.1
Purity: \geq 98%
UV/Vis.: λ_{max} : 234, 241, 271, 303, 344, 359 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: \geq 4 years



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

Laboratory Procedures

Wiskostatin is supplied as a crystalline solid. A stock solution may be made by dissolving the wiskostatin in the solvent of choice. Wiskostatin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of wiskostatin in these solvents is approximately 0.25, 20, and 25 mg/ml, respectively.

Wiskostatin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, wiskostatin should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Wiskostatin has a solubility of approximately 0.1 mg/ml in a 1:9 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Wiskott-Aldrich syndrome proteins (WASPs) regulate the actin cytoskeleton by directly interacting with actin in the Arp2/3 complex.¹ As a result, they have essential functions in diverse cellular processes, including phagocytosis, cell motility, and membrane trafficking.² Wiskostatin is a cell-permeable, selective inhibitor of neural WASP (N-WASP, IC₅₀ = ~10 μ M).² It directly associates with the GTPase-binding domain of N-WASP, preventing its activation by Cdc42 and phosphatidylinositol 4,5-bisphosphate.² By inhibiting N-WASP, wiskostatin interferes with membrane transport, endocytosis, and neurological development.³⁻⁵

References

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2. Peterson, J.R., Bickford, L.C., Morgan, D., et al. Chemical inhibition of N-WASP by stabilization of a native autoinhibited conformation. *Nat. Struct. Mol. Biol.* **11(8)**, 747-755 (2004).
3. Guerriero, C.J. and Weisz, O.A. N-WASP inhibitor wiskostatin nonselectively perturbs membrane transport by decreasing cellular ATP levels. *Am. J. Physiol. Cell Physiol.* **292(4)**, C1562-C1566 (2007).
4. Welliver, T.P., Chang, S.L., Linderman, J.J., et al. Ruffles limit diffusion in the plasma membrane during macropinosome formation. *J. Cell Sci.* **124(23)**, 4106-4114 (2011).
5. Wegner, A.M., Nebhan, C.A., Hu, L., et al. N-WASP and the Arp2/3 complex are critical regulators of actin in the development of dendritic spines and synapses. *J. Biol. Chem.* **283(23)**, 15912-15920 (2008).

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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