

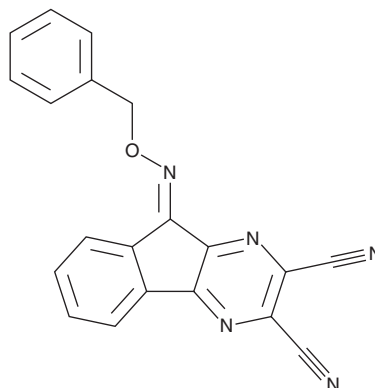
PRODUCT INFORMATION



DUB-IN-1

Item No. 41737

CAS Registry No.: 924296-18-4
Formal Name: 9-[(phenylmethoxy) imino]-9H-indeno[1,2-b] pyrazine-2,3-dicarbonitrile
Synonyms: Deubiquitinase-IN-1, Deubiquitinase Inhibitor 1, DUB Inhibitor 1, DUBs-IN-1, DUBs Inhibitor 1
MF: C₂₀H₁₁N₅O
FW: 337.3
Purity: ≥95%
Supplied as: A 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

DUB-IN-1 is supplied as a solid. A stock solution may be made by dissolving the DUB-IN-1 in the solvent of choice, which should be purged with an inert gas. DUB-IN-1 is soluble (≥10 mg/ml) in DMSO.

Description

DUB-IN-1 is an inhibitor of ubiquitin-specific protease 8 (USP8; IC₅₀ = 0.85 μM).¹ It is selective for USP8 over USP7 (IC₅₀ = >100 μM). It inhibits the proliferation of LN-229, U87MG, and T98G glioblastoma cells when used at concentrations ranging from 200 to 800 nM.² DUB-IN-1 (500 and 800 nM) reduces the migration and stemness of LN-229 and T98G cells and sensitizes both to ionizing radiation. It also reduces the viability of a variety of esophageal squamous cell carcinoma (ESCC) cells (IC₅₀s = 1.58-2.14 μM) and induces apoptosis, autophagy, and cell cycle arrest at the G₂/M phase in KYSE-450 and KYSE-30 ESCC cells.³

References

- Colombo, M., Vallese, S., Peretto, I., *et al.* Synthesis and biological evaluation of 9-oxo-9H-indeno[1,2-b]pyrazine-2,3-dicarbonitrile analogues as potential inhibitors of deubiquitinating enzymes. *ChemMedChem* **5**(4), 552-558 (2010).
- Long, Y., Hu, Z., Yang, D., *et al.* Pharmacological inhibition of the ubiquitin-specific protease 8 effectively suppresses glioblastoma cell growth. *Open Life Sci.* **18**(1), 20220562 (2023).
- Sha, B., Sun, Y., Zhao, S., *et al.* USP8 inhibitor-induced DNA damage activates cell cycle arrest, apoptosis, and autophagy in esophageal squamous cell carcinoma. *Cell Biol. Toxicol.* **39**(5), 2011-2032 (2023).

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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