

PRODUCT INFORMATION

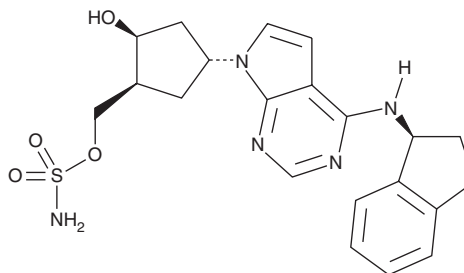


MLN4924

Item No. 15217

CAS Registry No.: 905579-51-3
Formal Name: sulfamic acid, [(1S,2S,4R)-4-[4-[[[(1S)-2,3-dihydro-1H-inden-1-yl]amino]-7H-pyrrolo[2,3-d]pyrimidin-7-yl]-2-hydroxycyclopentyl]methyl ester

Synonym: Pevonedistat
MF: C₂₁H₂₅N₅O₄S
FW: 443.5
Purity: ≥98%
UV/Vis.: λ_{max}: 213, 279 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

MLN4924 is supplied as a crystalline solid. A stock solution may be made by dissolving the MLN4924 in the solvent of choice, which should be purged with an inert gas. MLN4924 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of MLN4924 in ethanol is approximately 12.5 mg/ml and approximately 20 mg/ml in DMSO and DMF.

MLN4924 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, MLN4924 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. MLN4924 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

NEDD8 is an ubiquitin-like protein whose activity is required to activate cullin-RING ubiquitin E3 ligases (CRLs) responsible for the ubiquitination and proteasome-dependent turnover of certain substrates with roles relevant to cellular processes important for cancer cell survival. Neddylation of CRLs is initiated by NEDD8-activating enzyme (NAE), which has become a novel target in cancer therapeutic research.¹ MLN4924 is an analog of adenosine 5'-monophosphate that selectively inhibits NAE (IC₅₀ = 4.7 nM).² At much higher concentrations, MLN4924 inhibits the related enzymes ubiquitin-activating enzyme and SUMO-activating enzyme with IC₅₀ values of 1.5 and 8.2 μM, respectively.² At 0.3 μM, MLN4924 has been shown to disrupt CRL-mediated protein turnover leading to apoptosis in HCT116 cells by deregulating S-phase DNA synthesis.² *In vivo*, 30-60 mg/kg MLN4924 dose-dependently suppresses the growth of human tumor xenografts in mice.²

References

1. Soucy, T.A., Smith, P.G., and Rolfe, M. Targeting NEDD8-activated cullin-RING ligases for the treatment of cancer. *Clin. Cancer Res.* **15(12)**, 3912-3916 (2009).
2. Soucy, T.A., Smith, P.G., Milhollen, M.A., *et al.* An inhibitor of NEDD8-activating enzyme as a new approach to treat cancer. *Nature* **458(7239)**, 732-736 (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

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