

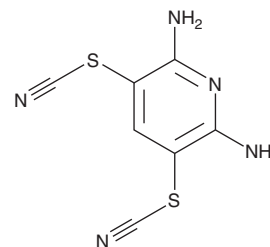
PRODUCT INFORMATION



PR-619

Item No. 16276

CAS Registry No.: 2645-32-1
Formal Name: thiocyanic acid, C,C'-(2,6-diamino-3,5-pyridinediyl) ester
Synonyms: 2,6-Diamino-3,5-dithiocyanopyridine, DUB Inhibitor V
MF: C₇H₅N₅S₂
FW: 223.3
Purity: ≥98%
UV/Vis.: λ_{max}: 220, 266, 320 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

PR-619 is supplied as a crystalline solid. A stock solution may be made by dissolving the PR-619 in the solvent of choice. PR-619 is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of PR-619 in these solvents is approximately 20 and 10 mg/ml, respectively.

PR-619 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, PR-619 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. PR-619 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

PR-619 is a general inhibitor of deubiquitylating enzymes (DUBs), significantly reducing the activity of a panel of DUBs with EC₅₀ values ranging from 5-20 μM.¹ It is cell-permeable and reversible in its action.¹ It is selective for DUBs over other proteases.¹ PR-619 induces the accumulation of polyubiquitinated proteins in cells, including those not involved in the ubiquitin-proteasome system.² It is used to study the role of DUBs in diverse pathways, including protein turnover and neurodegeneration.³⁻⁵

References

1. Altun, M., Kramer, H.B., Willems, L.I., *et al.* Activity-based chemical proteomics accelerates inhibitor development for deubiquitylating enzymes. *Chem. Biol.* **18(11)**, 1401-1412 (2011).
2. Udeshi, N.D., Mani, D.R., Eisenhaure, T., *et al.* Methods for quantification of *in vivo* changes in protein ubiquitination following proteasome and deubiquitinase inhibition. *Mol. Cell. Proteomics* **11(15)**, 148-159 (2012).
3. Balut, C.M., Loch, C.M., and Devor, D.C. Role of ubiquitylation and USP8-dependent deubiquitylation in the endocytosis and lysosomal targeting of plasma membrane KCa3.1. *FASEB J.* **25(11)**, 3938-3948 (2011).
4. Seiberlich, V., Goldbaum, O., Zhukareva, V., *et al.* The small molecule inhibitor PR-619 of deubiquitinating enzymes affects the microtubule network and causes protein aggregate formation in neural cells: Implications for neurodegenerative diseases. *Biochim. Biophys. Acta* **1823(11)**, 2057-2068 (2012).
5. Bertuccio, C.A., Lee, S.-L., Wu, G., *et al.* Anterograde trafficking of KCa3.1 in polarized epithelia is Rab1- and Rab8-dependent and recycling endosome-independent. *PLoS One* **9(3)**, 1-16 (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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