# PRODUCT INFORMATION

## SMER3

*Item No. 15324*

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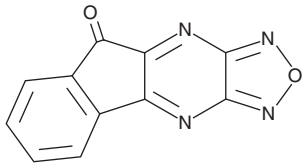
| **CAS Registry No.:** | 67200-34-4 |
| **Formal Name:** | 9H-indeno[1,2-e][1,2,5] oxadiazolo[3,4-b]pyrazin-9-one |
| **Synonyms:** | MET30 Antagonist, $SCF^{MET30}$ Inhibitor |
| **MF:** | $C_{11}H_4N_4O_2$ |
| **FW:** | 224.2 |
| **Purity:** | ≥95% |
| **UV/Vis.:** | $\lambda_{max}$: 218, 241, 289, 357 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

SMER3 is supplied as a crystalline solid. A stock solution may be made by dissolving the SMER3 in the solvent of choice, which should be purged with an inert gas. SMER3 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of SMER3 in these solvents is approximately 5 mg/ml.

SMER3 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, SMER3 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. SMER3 has a solubility of approximately 0.25 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

SMER3 is a selective inhibitor of Skp1-Cullin-F-box $(SCF)^{Met30}$ ubiquitin ligase, an E3 ligase that regulates transcription, cell-cycle control, and immune response.[1,2] It is a small molecule enhancer of rapamycin (Item No. 13346), in that it enhances yeast cell lethality in response to rapamycin.[1] SMER3, at 5 µM, upregulates a set of methionine biosynthesis genes by altering the $SCF^{Met30}$ complex, preventing ubiquitination of target proteins, including Met4.[1] As ubiquitin E3 ligases are involved in tumorigenesis, SMER3 has potential applications in cancer research.[3]

### References


1. Aghajan, M., Jonai, N., Flick, K., *et al*. Chemical genetics screen for enhancers of rapamycin identifies a specific inhibitor of an SCF family E3 ubiquitin ligase. *Nat. Biotechnol.* **28(7)**, 738-742 (2010).
2. Petroski, M.D. and Deshaies, R.J. Function and regulation of cullin-RING ubiquitin ligases. *Nat. Rev. Mol. Cell Biol.* **6(1)**, 9-20 (2005).
3. Nalepa, G., Rolfe, M., and Harper, J.W. Drug discovery in the ubiquitin-proteasome system. *Nat. Rev. Drug Discov.* **5(7)**, 596-613 (2006).





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