

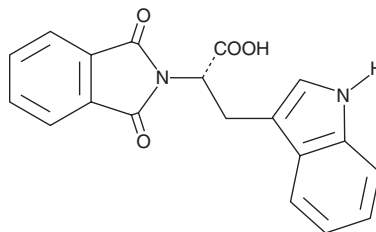
# Product Information



## RG-108

Item No. 13302

**CAS Registry No.:** 48208-26-0  
**Formal Name:**  $\alpha$ -(1,3-dihydro-1,3-dioxo-2H-isoindol-2-yl)-( $\alpha$ S)-1H-indole-3-propanoic acid  
**Synonyms:** N-Phthalyl-L-Tryptophan  
**MF:** C<sub>19</sub>H<sub>14</sub>N<sub>2</sub>O<sub>4</sub>  
**FW:** 334.3  
**Purity:**  $\geq 98\%$   
**Stability:**  $\geq 2$  years at  $-20^{\circ}\text{C}$   
**Supplied as:** A crystalline solid



### Laboratory Procedures

For long term storage, we suggest that RG-108 be stored as supplied at  $-20^{\circ}\text{C}$ . It should be stable for at least two years.

RG-108 is supplied as a crystalline solid. A stock solution may be made by dissolving the RG-108 in an organic solvent purged with an inert gas. RG-108 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of RG-108 in these solvents is approximately 50 mg/ml in ethanol and approximately 30 mg/ml in DMSO and DMF.

RG-108 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, RG-108 should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. RG-108 has a solubility of approximately 0.1 mg/ml in a 1:10 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

DNA methylation regulates gene expression in normal and malignant cells. RG-108 is a non-nucleoside DNA methyltransferase inhibitor ( $\text{IC}_{50} = 115 \text{ nM}$  *in vitro*).<sup>1</sup> It significantly reduces the methylation of genomic DNA in cells at 10  $\mu\text{M}$  without detectable toxicity, distinguishing it from nucleoside-based inhibitors like 5-azacytidine.<sup>1,2</sup> Further, RG-108 inhibits DNA methyltransferase activity by blocking the enzyme active site.<sup>2</sup> Through these actions, RG-108 demethylates and reactivates epigenetically silenced tumor suppressor genes.<sup>1</sup>

### References

1. Brueckner, B., Boy, R.G., Siedlecki, P., *et al.* Epigenetic reactivation of tumor suppressor genes by a novel small-molecule inhibitor of human DNA methyltransferases. *Cancer Res* **65**(14), 6305-6311 (2005).
2. Stresemann, C., Brueckner, B., Musch, T., *et al.* Functional diversity of DNA methyltransferase inhibitors in human cancer cell lines. *Cancer Res* **66**(5), 2794-2800 (2006).

### Related Products

Zebularine - Item No. 10975 • 2',3',5'-triacetyl-5-Azacytidine - Item No. 13373 • DNA Methyltransferase 1 Monoclonal Antibody - Item No. 13479 • DNA Methyltransferase 2 Polyclonal Antibody - Item No. 13480 • DNA Methyltransferase 3a Monoclonal Antibody (Clone 64B814.1) - Item No. 13482 • DNA Methyltransferase 3b Monoclonal Antibody - Item No. 13485

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**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY; NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

#### MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will meet our specifications at the time of delivery.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have **any obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees.

Buyer's **exclusive remedy** and Cayman's sole liability hereunder shall be limited to a refund of the purchase price, or at Cayman's option, the replacement, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

For further details, please refer to our Warranty and Limitation of Remedy located on our website and in our catalog.

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