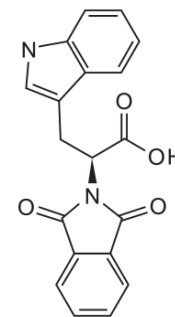


RG108

Catalog Number: ST10027



Size	5 mg
Description	RG108 is an epigenetic modifier that inhibits DNA methyltransferase by blocking the enzyme active site (IC ₅₀ = 115 nM). It has been shown to enhance reprogramming efficiency of human and mouse somatic cells to induced pluripotent stem cells. RG108 has also been used for demethylation and reactivation of epigenetically silenced tumor suppressor genes.
Molecular Weight	334.33
Molecular Formula	C ₁₉ H ₁₄ N ₂ O ₄
Chemical Name	(2S)-2-(1,3-dioxoisindol-2-yl)-3-(1H-indol-3-yl)propanoic acid
CAS Number	48208-26-0
PubChem Identifier	702558
Appearance	Brown solid
Purity	>99% by HPLC analysis
Solubility	Soluble in DMSO at 100 mM and ethanol at 100 mM
Reconstitution	For a 10 mM concentrated stock solution, reconstitute the compound by adding 1495.5 µL of DMSO to the entire contents of vial. If precipitate is observed, warm the solution to 37°C for 2 to 5 minutes.
Recommended Usage	For use in cell culture, warm medium just prior to adding the reconstituted compound. Once the compound is added, mix and filter-sterilize the medium using a 0.2 µM low-protein binding filter. Note: for most cells, the maximum tolerance to DMSO is less than 0.5%.
Storage and Stability	Solid: Shipped at room temperature. Store at -20°C. Stable for 6 months when stored as directed. Solution: Following reconstitution, store aliquots in tightly sealed vials at -20°C. Avoid repeated freeze-thaw cycles.
References	<p>Brueckner, B., et al. (2005) Epigenetic reactivation of tumor suppressor genes by a novel small-molecule inhibitor of human DNA methyltransferases. <i>Cancer Res</i> 65(14): 6305-6311. PMID: 16024632.</p> <p>Mali, P., et al. (2010) Butyrate greatly enhances derivation of human induced pluripotent stem cells by promoting epigenetic remodeling and the expression of pluripotency-associated genes. <i>Stem Cells</i> 28(4): 713-720. PMID: 20201064.</p> <p>Shi, Y., et al. (2008) Induction of pluripotent stem cells from mouse embryonic fibroblasts by Oct4 and Klf4 with small-molecule compounds. <i>Cell Stem Cell</i> 3(5): 568-574. PMID: 18983970.</p> <p>Stresemann, C., et al. (2006) Functional diversity of DNA methyltransferase inhibitors in human cancer cell lines. <i>Cancer Res</i> 66(5): 2794-2800. PMID: 16510601.</p>

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