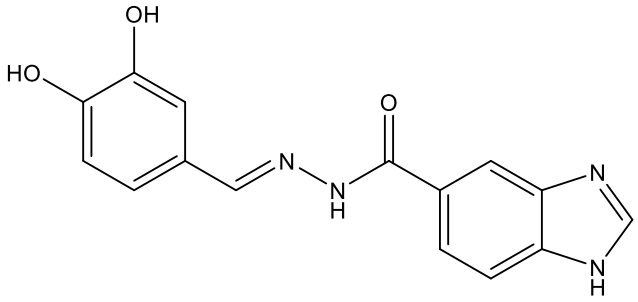
Catalog # 10-5161

DBIC

CAS# 487026-67-5

(E)-N'-(3,4-Dihydroxybenzylidene)-1H-benzo[d]imidazole-5-carbohydrazide

Lot # S107078



DBIC specifically inhibits S-nitrosylation of DNA methyltransferase 3B (DNMT3B) at low concentrations, IC_{50}≤100 nM, without affecting its enzymatic activity. Treatment with DBIC prevents nitric oxide-induced conversion of human colonic adenoma to adenocarcinoma *in vitro*. Treatment with DBIC strongly attenuates tumor development in a mouse model of carcinogenesis triggered by inflammation-induced NO production. DNMT3B-mediated DNA methylation is regulated by S-nitrosylaton and DBIC represents a new useful tool for studying this system.[1] A negative control compound, DBIC-neg2 (Cat # 10-5162) is also available.

1) Okuda *et al*. (2023), *Pivotal role for S-nitrosylation of DNA methyltransferase 3B in epigenetic regulation of tumorigenesis*; Nat. Commun, **14** 621

PHYSICAL DATA

Molecular Weight:	296.29
Molecular Formula:	$C_{15}H_{12}N_4O_3$
Purity:	>98% by TLC
	NMR: (Conforms)
Solubility:	DMSO (30 mg/ml)
Physical Description:	Grey solid
Storage and Stability:	Store as supplied desiccated at -20°C for up to 2 years from the date of purchase.
	Solutions in DMSO may be stored at -20°C for up to 1 month.

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