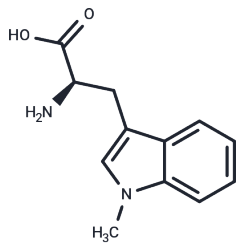
Data Sheet (Cat.No.T6543)

TargetMol

Indoximod

Chemical Properties



CAS No. : 110117-83-4

Formula: C12H14N2O2

Molecular Weight: 218.25

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Indoximod (NLG-8189) is a methylated tryptophan with immune checkpoint inhibitory activity. Indoximod inhibits the enzyme indoleamine 2, 3-dioxygenase (IDO), which degrades the essential amino acid tryptophan, and may increase or maintain tryptophan levels important to T cell function. Tryptophan depletion is associated with immunosuppression involving T cell arrest and anergy.
Targets(IC50)	IDO,Indoleamine 2,3-Dioxygenase (IDO)
In vitro	Indoximod significantly reverses the suppression of T cells created by IDO-expressing dendritic cells, using both human monocyte-derived dendritic cells and murine dendritic cells isolated directly from tumor-draining lymph nodes. [1] Indoximod activates a Trp sufficiency signal that stimulates mTOR, and relieves IDO-induced Trp deprivation as well as an autophagic response. [2]
In vivo	In mouse models of transplantable melanoma and transplantable and autochthonous breast cancer, Indoximod (400 mg/kg p.o.) enhances antitumor immunity in the setting of combined chemo-immunotherapy regimens. [1]
Kinase Assay	1MT enantiomers are solubilized in DMSO containing 0.1N HCl and added at concentrations of 100, 50, and 0 μM to wells containing the reaction mixture with tryptophan (0-200 μM) followed by addition of IDO enzyme. Plates are sealed and incubated 1 hr in a humidified 37°C incubator, after which the reactions are terminated by addition of 12.5 μl 30% TCA per well. Plates are then resealed in plastic wrap, incubated 30 min at 50°C to hydrolyze the reaction product N-formylkynurenine to kynurenine, and centrifuged. Supernatants are transferred to a flat-bottom 96-well plate, mixed with 100 μl Ehrlich reagent and incubated 10 min at room temperature. Absorbance at 490 nm is read[1].

Solubility Information

Solubility	DMSO: Slightly soluble, H2O: < 1 mg/mL (insoluble) (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.5819 mL	22.9095 mL	45.819 mL
5 mM	0.9164 mL	4.5819 mL	9.1638 mL
10 mM	0.4582 mL	2.291 mL	4.5819 mL
50 mM	0.0916 mL	0.4582 mL	0.9164 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Hou DY, et al. Cancer Res. 2007, 67(2), 792-801.
Nguyen D J M, Theodoropoulos G, Li Y Y, et al. Targeting the kynurenine pathway for the treatment of cisplatin resistant lung cancer. Molecular Cancer Research. 2019: molcanres. 0239.2019
Metz R, et al. Oncoimmunology. 2012, 1(9), 1460-1468.
Nguyen D J M, Theodoropoulos G, Li Y Y, et al. Targeting the kynurenine pathway for the treatment of cisplatin resistant lung cancer[J]. Molecular Cancer Research. 2019: molcanres. 0239.2019.
Nguyen D J M, Theodoropoulos G, Li Y Y, et al. Targeting the kynurenine pathway for the treatment of cisplatin-resistant lung cancer[J]. Molecular Cancer Research. 2020, 18(1): 105-117.

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