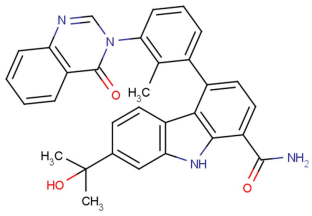
Data Sheet (Cat.No.T14681)

TargetMol
A DRUG SCREENING EXPERT

BMS-935177

Chemical Properties



CAS No.:	1231889-53-4
Formula:	C31H26N4O3
Molecular Weight:	502.56
Appearance:	N/A
Storage:	0-4℃ for short term (days to weeks), or -20℃ for long term (months).

Biological Description

Description	BMS-935177 is a potent and selective reversible inhibitor of Bruton' s tyrosine kinase (Btk), with an IC50 of 3 nM.
Targets(IC_{50})	BTK: 3 nM
In vitro	BMS-935177 inhibits calcium flux in human Ramos B cells (IC50=27 nM) and inhibits CD69 surface expression in peripheral B cells stimulated with antiIgM and anti-IgG. However, BMS-935177 has no effect on CD69 surface expression in B cells stimulated through the CD40 receptor with CD40 ligand. BMS-935177 shows mean IC50 values of 550±100 (n=11) and 2060±240 nM (n=3) in human and mouse whole blood, respectively[1]. In B cells stimulated through the BCR, BMS-935177 selectively inhibits several different readouts. Against IgG-containing immune complexdriven low affinity activating Fcγ receptor (FcγRIIa and FcγRIII) end points in peripheral blood mononuclear cells (PBMCs). BMS-935177 effectively inhibits TNFα production with an IC50 value of 14 nM.
In vivo	BMS-935177 provides a clear dose-dependent reduction in both the severity and incidence of clinically evident disease in this rodent model of RA, at once daily oral doses of 10, 20, and 30 mg/kg beginning on the day of primary immunization. BMS-935177 inhibits anti-KLH antibodies of the IgG isotype at day 14, with statistically significant reductions at all doses, when dosed orally once daily at 5, 20, and 45 mg/kg to mice. The plasma concentration is maintained above the mouse whole blood BCR-stimulated CD69 IC50 value of 2 μM for only approximately 5 h, in satellite mice from this study dosed with 6 at 5 mg/kg. At 10 mg/kg of BMS-935177, disease severity is reduced about 40% compared to vehicle treatment, and the percentage of animals showing any signs of disease is reduced by a third[1].

Solubility Information

Solubility	DMSO: 130 mg/mL (258.68 mM) (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.99 mL	9.949 mL	19.898 mL
5 mM	0.398 mL	1.99 mL	3.98 mL
10 mM	0.199 mL	0.995 mL	1.99 mL
50 mM	0.04 mL	0.199 mL	0.398 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. De Lucca GV, et al. Small Molecule Reversible Inhibitors of Bruton's Tyrosine Kinase (BTK): Structure-Activity Relationships Leading to the Identification of 7-(2-Hydroxypropan-2-yl)-4-[2-methyl-3-(4-oxo-3,4-dihydroquinazolin-3-yl)phenyl]-9H-carbazole-1-carboxamide (BMS-935177). J Med Chem. 2016 Sep 8;59(17):7915-35.

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