Datasheet

Boceprevir

Product Name	Boceprevir
Catalogue Number	BSV-S3733
Chemical Formula	$C_{27}H_{45}N_5O_5$
Function	HCV protease inhibitor
CAS No.:	394730-60-0

Description:

Boceprevir is an oral, direct acting **hepatitis C virus (HCV) protease** inhibitor with Ki value of 14 nM for NS3. It is used in combination with other antiviral agents in the treatment of chronic hepatitis C, genotype 1.

Product Details:

Target: NS3/4A protease [1]

Chemical name: 3-Azabicyclo[3.1.0]hexane-2-carboxamide, N-[3-amino-1-(cyclobutylmethyl)-2,3-dioxopropyl]-3-[(2S)-2-[[[(1,1-dimethylethyl)amino]carbonyl]amino]-3,3-dimethyl-1-oxobutyl]-6,6-dimethyl-, (1R,2S,5S)-

Formula: $C_{27}H_{45}N_5O_5$

Molecular weight: 519.68

Purity: 99.6 %

Solubility: 100 mg/mL (DMSO), 100 mg/mL (ethanol)

Storage: 3 years -20°C powder, 2 years -80°C in solvent

Regulatory/ Restrictions: For laboratory use only.

Preparing stock solutions:

Concentration/ Mass	1 mg	5 mg	10 mg
1 mM	1.9243 mL	9.6213 mL	19.2426 mL

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5 mM	0.3849 mL	1.9243 mL	3.8485 mL
10 mM	0.1924 mL	0.9621 mL	1.9243 mL
50 mM	0.0385 mL	0.1924 mL	0.3849 mL

Biological Activity:

In vitro:
Treatment with NLRP3 Inflammasome Inhibitor I significantly limits IL-1β release after LPS and ATP challenge. NLRP3 Inflammasome Inhibitor I is not a caspase-1 inhibitor[1].

In vivo:
The small molecule NLRP3 Inflammasome Inhibitor I, an intermediate substrate in the glyburide synthesis free of the cyclohexylurea moiety, inhibits the formation of the NLRP3 inflammasome in cardiomyocytes and limits the infarct size following myocardial ischemia/reperfusion in the mouse, without affecting glucose metabolism[1].

Protocol *(Only for Reference)*

Cell Assay: [1]	
Cell lines	J774A.1 cells
Concentrations	400 μM
Incubation Time	30 mins
Method	J774A.1 cells, a murine macrophage cell line, are plated at 5×10^4 cells/well in a 96 multiwell plate for 24 hours in RPMI medium supplemented with 10% of fetal bovine serum (FBS). The cells are primed with Escherichia coli 0111:B4 LPS(1 μg/ml) for 4 hours and then ATP (5 mM) for 30 minutes to induce the NLRP3 inflammasome formation. The supernatants are collected and levels of IL-1β are measured with a mouse IL-1β ELISA kit. To test the inhibitory effects of 16673-34-0 on NLRP3 inflammasome activation, cells are co-treated with 16673-34-0 (400μM) or Glyburide (400μM) at the time of ATP for 30 minutes, and IL-1β levels are used as read-out.
Animal Study: [1]	
Animal Models	CD1 mice
Dosages	100 mg/kg
Administration	i.p.

References:
[1] Marchetti C, et al. J Cardiovasc Pharmacol. 2014, 63(4):316-322.