Product Data Sheet

Product Name: BT-11
Cat. No.: GC30803

Chemical Properties

Cas. No.	1912399-75-7		
SMILES	O=C(N1CCN(C(C2=NC(C3=NC4=CC=CC=C4N3)=CC=C2)=O)CC1)C5=NC(C6=NC7=CC=CC=C7N6)=CC=C5		
Formula	$C_{30}H_{24}N_8O_2$	M.Wt	528.56
Solubility	DMSO : ≥ 30 mg/mL (56.76 mM)	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	BT-11		

Protocol

Animal experiment:

Rats: Male Harlan Sprague Dawley rats are treated with a single oral dose of 500 mg/kg and 80 mg/kg/d for 14 days. Treated and control rats are observed for behavioral detriments, and blood and tissues are collected for clinical pathology and histopathological examination[2]. Mice: Wild type and LANCL2−/− male mice are treated with 8 mg/kg/d BT-11 over 8 weeks. Mice are sacrificed and spleens are collected for splenocytes isolation. Cell lysates are collected and cAMP intracellular concentration is measured[1].

References:

[1]. Carbo A, et al. An N,N-Bis(benzimidazolylpicolinoyl)piperazine (BT-11): A Novel Lanthionine Synthetase C-Like 2-Based Therapeutic for Inflammatory Bowel Disease. J Med Chem. 2016 Nov 23;59(22):10113-10126.
[2]. Bissel P, et al. Exploratory Studies With BT-11: A Proposed Orally Active Therapeutic for Crohn's Disease. Int J Toxicol. 2016 Sep;35(5):521-9.

Background

Omilancor (BT-11) is an orally active lanthionine synthetase C-like 2 (LANCL2) binding compound for treating inflammatory bowel disease (IBD) (Kd value of 7.7 ?M).

In vitro measurement of cAMP in mouse splenocytes extracted from either WT or LANCL2?/? mice and treated with increasing doses of BT-11 demonstrates BT-11 stimulates cAMP production by activating the LANCL2 pathway[1].

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Oral treatment with BT-11 (8 mg/kg/day) ameliorates colitis in mice. Safety assessment in rats indicateds that Oral treatment with BT-11 at high doses has an excellent safety profile up to 1000 mg/kg/day. In a dextran sodium sulfate colitis mouse model, oral administration of BT-11 upregulates the expression of IL-10 and downregulates the expression of TNF-α mRNA. It also upregulates LANCL2 expression in the gastrointestinal tract[1].

[1] Carbo A, et al. J Med Chem. 2016, 59(22):10113-10126.

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