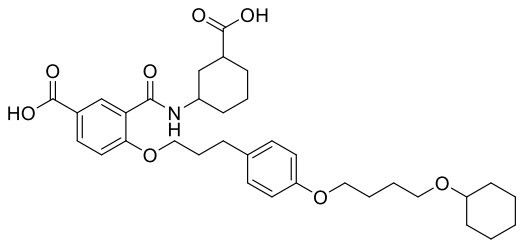
Product data sheet

MedKoo Cat#: 522492 Name: HAMI3379 CAS: 712313-35-4 Chemical Formula: $C_{34}H_{45}NO_8$ Exact Mass: 595.31452 Molecular Weight: 595.733	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.
	In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:

HAMI 3379 is a selective CysLT2 receptor antagonist. HAMI 3379 protects against acute brain injury after focal cerebral ischemia in rats. HAMI 3379 attenuates ischemia-like neuronal injury by inhibiting microglial activation. HAMI 3379 effectively blocked CysLT2R-mediated microglial activation, thereby indirectly attenuating ischemic neuronal injury. Therefore, CysLT2R antagonists may represent a new type of therapeutic agent in the treatment of ischemic stroke.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMF	20.0	33.57
DMF:PBS (pH 7.2) (1:1)	0.5	0.84
DMSO	60.0	100.72
Ethanol	5.0	8.39

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	**1 mg**	**5 mg**	**10 mg**
1 mM	1.68 mL	8.39 mL	16.79 mL
5 mM	0.34 mL	1.68 mL	3.36 mL
10 mM	0.17 mL	0.84 mL	1.68 mL
50 mM	0.03 mL	0.17 mL	0.34 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

1. Merten N, Fischer J, Simon K, Zhang L, Schröder R, Peters L, Letombe AG, Hennen S, Schrage R, Bödefeld T, Vermeiren C, Gillard M, Mohr K, Lu QR, Brüstle O, Gomeza J, Kostenis E. Repurposing HAMI3379 to Block GPR17 and Promote Rodent and Human Oligodendrocyte Differentiation. Cell Chem Biol. 2018 Jun 21;25(6):775-786.e5. doi: 10.1016/j.chembiol.2018.03.012. Epub 2018 Apr 26. PMID: 29706593; PMCID: PMC6685917.
2. Wunder F, Tinel H, Kast R, Geerts A, Becker EM, Kolkhof P, Hütter J, Ergüden J, Härter M. Pharmacological characterization of the first potent and selective antagonist at the cysteinyl leukotriene 2 (CysLT(2)) receptor. Br J Pharmacol. 2010 May;160(2):399-409. doi: 10.1111/j.1476-5381.2010.00730.x. PMID: 20423349; PMCID: PMC2874861.

In vivo study

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1. Zhou L, Zhang J, Han X, Fang J, Zhou S, Lu L, Shi Q, Ying H. CysLT2R Antagonist HAMI 3379 Ameliorates Post-Stroke Depression through NLRP3 Inflammasome/Pyroptosis Pathway in Gerbils. Brain Sci. 2022 Jul 24;12(8):976. doi: 10.3390/brainsci12080976. PMID: 35892417; PMCID: PMC9330558.

7. Bioactivity

Biological target:

HAMI 3379 is a potent and selective Cysteinyl leukotriene (CysLT2) receptor antagonist.

In vitro activity

In binding studies using membranes from the CysLT(2) and CysLT(1) receptor cell lines, HAMI3379 inhibited [(3)H]-LTD(4) binding with IC(50) values of 38 nM and >10 000 nM respectively. In isolated Langendorff-perfused guinea pig hearts HAMI3379 concentration-dependently inhibited and reversed the LTC(4)-induced perfusion pressure increase and contractility decrease. HAMI3379 was identified as a potent and selective CysLT(2) receptor antagonist, which was devoid of CysLT receptor agonism.

Reference: Br J Pharmacol. 2010 May;160(2):399-409. https://pubmed.ncbi.nlm.nih.gov/20423349/

In vivo activity

In contrast to the PSD group, HM3379 significantly ameliorated PSD-induced neuronal loss (1441.00 ± 21.71 vs. 1184.00 ± 26.90, $p < 0.05$; Figure 1G,H). In addition, HM3379 treatment diminished the number of TUNEL-positive cells in the cerebral cortex of the PSD group (Figure 2A). These results reveal that HM3379 can ameliorate depression-like behaviors and neurological injury in the PSD model of gerbils.

Reference: Brain Sci. 2022 Jul 24;12(8):976. https://pubmed.ncbi.nlm.nih.gov/35892417/