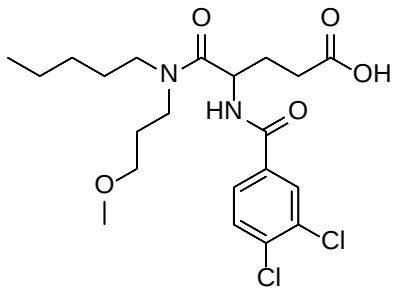
Product data sheet

MedKoo Cat#: 317122 Name: Loxiglumide CAS: 107097-80-3 Chemical Formula: $C_{21}H_{30}Cl_2N_2O_5$ Exact Mass: 460.1532 Molecular Weight: 461.38	
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:

Loxiglumide is a potent, orally active, and selective CCK-A receptor antagonist which stimulates calorie intake and hunger feelings in humans. Loxiglumide inhibits pancreatic secretion of digestive enzymes, and also blocks CCK-induced gastric secretions and emptying. Intravenous administration of loxiglumide antagonized the CCK-induced reduction of gastric emptying in rats, acceleration of intestinal transport in mice, increase in ileal motility in rabbits, gallbladder contraction in guinea pigs and acceleration of gallbladder emptying in mice.

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	30.0	65.02
DMSO	58.71	127.26
DMSO:PBS (pH 7.2) (1:7)	0.12	0.26
Ethanol	33.07	71.68

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	**1 mg**	**5 mg**	**10 mg**
1 mM	2.17 mL	10.84 mL	21.67 mL
5 mM	0.43 mL	2.17 mL	4.33 mL
10 mM	0.22 mL	1.08 mL	2.17 mL
50 mM	0.04 mL	0.22 mL	0.43 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. Demenis C, McLaughlin J, Smith CP. Sulfated Cholecystokinin-8 Promotes CD36-Mediated Fatty Acid Uptake into Primary Mouse Duodenal Enterocytes. Front Physiol. 2017 Sep 1;8:660. doi: 10.3389/fphys.2017.00660. PMID: 28919867; PMCID: PMC5586203.
2. Hirata M, Itoh M, Tsuchida A, Ooishi H, Hanada K, Kajiyama G. Cholecystokinin receptor antagonist, loxiglumide, inhibits invasiveness of human pancreatic cancer cell lines. FEBS Lett. 1996 Apr 1;383(3):241-4. doi: 10.1016/0014-5793(96)00245-1. PMID: 8925905.

In vivo study

Product data sheet

1. Yucel T, Gonullu D, Orhan Gurer A, Duzman R, Nihat Koksoy F, Yilmaz N, Sit M. The effects on diet, anastomotic type, and loxiglumide on gastric emptying following gastrojejunostomy. Int J Surg. 2009 Apr;7(2):163-7. doi: 10.1016/j.ijsu.2009.01.010. Epub 2009 Feb 13. PMID: 19342323.
2. Kanemitsu D, Sakagami J, Motoyoshi T, Nakajima T, Kataoka K. Effects of the cholecystokinin A receptor antagonist loxiglumide on the proliferation and cell cycle time of pancreatic acinar cells in rats. Pancreas. 2006 Mar;32(2):190-6. doi: 10.1097/01.mpa.0000202960.63977.d1. PMID: 16552340.

7. Bioactivity

Biological target:

Loxiglumide is a cholecystokinin (CCK-1) receptor antagonist.

In vitro activity

Exposure of primary mouse duodenal cells to 10 pM sulfated CCK-8 caused a two fold increase in dodecanoic acid fatty acid (FA) uptake. The selective CCK A receptor antagonist loxiglumide (100 μM) completely abolished the CCK-8 induced FA uptake.

Reference: Front Physiol. 2017 Sep 1;8:660. https://pubmed.ncbi.nlm.nih.gov/28919867/

In vivo activity

Eight-week-old Wistar rats were divided into the following groups: preadministration of loxiglumide (40 mg/kg) intravenously at 120, 60, and 0 minutes before endogenous CCK stimulation induced by a single oral administration of camostat (50 mg/kg) or exogenous CCK stimulation by a subcutaneous injection of CCK-8 (6 g/kg body weight). The most significant suppression of the proliferation of the acinar cells was observed in those groups which received loxiglumide 60 minutes before CCK stimulation ($P < 0.016$).

Reference: Pancreas. 2006 Mar;32(2):190-6. https://pubmed.ncbi.nlm.nih.gov/16552340/

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.