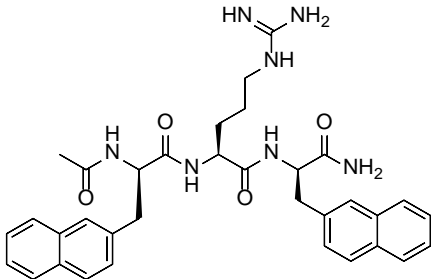


Product data sheet



MedKoo Cat#: 574372 Name: MCL-0020 CAS: 475498-26-1 Chemical Formula: C ₃₄ H ₃₉ N ₇ O ₄ Exact Mass: 609.3064 Molecular Weight: 609.731		
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:

MCL-0020 is a selective melanocortin MC4 receptor antagonist that significantly reverses stress-induced anorexia but has no effect on food intake in free-feeding rats. MCL-0020 exhibits anxiolytic-like activity in vivo.

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
TBD	TBD	TBD

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.64 mL	8.20 mL	16.40 mL
5 mM	0.33 mL	1.64 mL	3.28 mL
10 mM	0.16 mL	0.82 mL	1.64 mL
50 mM	0.03 mL	0.16 mL	0.33 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

Chaki S, Ogawa S, Toda Y, Funakoshi T, Okuyama S. Involvement of the melanocortin MC4 receptor in stress-related behavior in rodents. Eur J Pharmacol. 2003 Aug 1;474(1):95-101. doi: 10.1016/s0014-2999(03)02033-8. PMID: 12909200.

In vivo study

Chaki S, Ogawa S, Toda Y, Funakoshi T, Okuyama S. Involvement of the melanocortin MC4 receptor in stress-related behavior in rodents. Eur J Pharmacol. 2003 Aug 1;474(1):95-101. doi: 10.1016/s0014-2999(03)02033-8. PMID: 12909200.

7. Bioactivity

Biological target:

MCL0020 is a potent and selective melanocortin MC4 receptor antagonist, with an IC₅₀ of 11.63 nM.

In vitro activity

In addition, MCL0020 significantly attenuated the cAMP formation induced by alpha-MSH in COS-1 cells expressing the melanocortin MC4 receptor without affecting basal cAMP contents.

Reference: Eur J Pharmacol. 2003 Aug 1;474(1):95-101. <https://pubmed.ncbi.nlm.nih.gov/12909200/>

Product data sheet



In vivo activity

Restraint stress significantly reduced food intake in rats, and i.c.v. administration of MCL0020 dose-dependently and significantly attenuated restraint stress-induced anorexia without affecting food intake. Swim stress induced reduction in the time spent in the light area in the mouse light/dark exploration test, and MCL0020 significantly prevented it.

Reference: Eur J Pharmacol. 2003 Aug 1;474(1):95-101. <https://pubmed.ncbi.nlm.nih.gov/12909200/>

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.