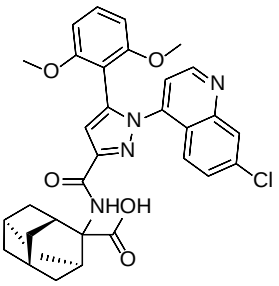
Product data sheet

MedKoo Cat#: 319617 Name: Meclinertant CAS: 146362-70-1 Chemical Formula: $C_{32}H_{31}ClN_4O_5$ Exact Mass: 586.1983 Molecular Weight: 587.073	
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:
Meclinertant, also known as SR-48692, is a neurotensin antagonist. SR 48692 counteracts neurotensin induced cell proliferation in human pancreatic ductal carcinoma cell line PANC-1. SR 48692 could inhibit the growth of MIA PaCa-2 cells in a neurotensin mediated fashion, and neurotensin could overcome this inhibition or stimulate proliferation.

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
DMSO	11.74	20.0

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.70 mL	8.52 mL	17.03 mL
5 mM	0.34 mL	1.70 mL	3.41 mL
10 mM	0.17 mL	0.85 mL	1.70 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. Moody TW, Ramos-Alvarez I, Jensen RT. Adding of neurotensin to non-small cell lung cancer cells increases tyrosine phosphorylation of HER3. Peptides. 2022 Oct;156:170858. doi: 10.1016/j.peptides.2022.170858. Epub 2022 Aug 3. PMID: 35932909; PMCID: PMC9529830.

2. Tokumoto H, Setoguchi T, Saitoh Y, Sasaki H, Nagano S, Maeda S, Tanimoto A, Taniguchi N. Neurotensin receptor 1 is a new therapeutic target for human undifferentiated pleomorphic sarcoma growth. Mol Carcinog. 2019 Dec;58(12):2230-2240. doi: 10.1002/mc.23111. Epub 2019 Sep 3. PMID: 31478563.

In vivo study

1. Takahashi K, Ehata S, Miyauchi K, Morishita Y, Miyazawa K, Miyazono K. Neurotensin receptor 1 signaling promotes pancreatic cancer progression. Mol Oncol. 2021 Jan;15(1):151-166. doi: 10.1002/1878-0261.12815. Epub 2020 Nov 20. PMID: 33034134; PMCID: PMC7782081.

2. Yin M, Kim YO, Choi JI, Jeong S, Yang SH, Bae HB, Yoon MH. Antinociceptive role of neurotensin receptor 1 in rats with chemotherapy-induced peripheral neuropathy. Korean J Pain. 2020 Oct 1;33(4):318-325. doi: 10.3344/kjp.2020.33.4.318. PMID: 32989196; PMCID: PMC7532295.

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7. Bioactivity

Biological target:

SR 48692 is a neurotensin antagonist; selective for NTS1 over NTS2 (apparent affinity, Ke, is 36 nM for NTS1).

In vitro activity

Using Calu3, NCI-H358, or NCI-H441 cells, the effects of NTS on HER3 transactivation were investigated. NTSR1 regulation of HER3 transactivation was impaired by SR48692 (NTSR1 antagonist) or monoclonal antibody (mAb)3481 (HER3 blocker).

Reference: Peptides. 2022 Oct;156:170858. https://pubmed.ncbi.nlm.nih.gov/35932909/

In vivo activity

Moreover, the treatment with SR48692, a selective NTSR1 antagonist, suppressed the activation of the MAPK and NF-κB signaling pathways and induction of target genes in pancreatic cancer cells in vitro, while the administration of SR48692 attenuated the tumorigenicity of pancreatic cancer cells in vivo. These findings suggest that NTSR1 may be a prognostic marker and a molecular target for pancreatic cancer treatment.

Reference: Mol Oncol. 2021 Jan;15(1):151-166. https://pubmed.ncbi.nlm.nih.gov/33034134/

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.