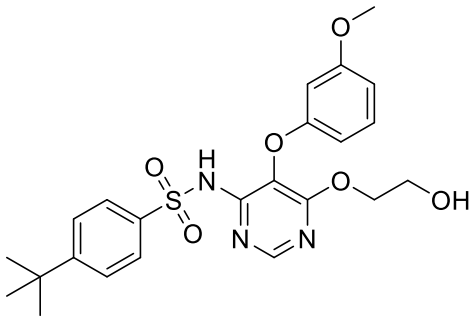
Product data sheet

MedKoo Cat#: 522679 Name: Ro 46-2005 CAS#: 150725-87-4 Chemical Formula: $C_{23}H_{27}N_3O_6S$ Exact Mass: 473.1621 Molecular Weight: 473.54	
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:
Ro 46-2005 is an endothelin (ET) receptor selective agonist.

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	100	211.18

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.11 mL	10.56 mL	21.12 mL
5 mM	0.42 mL	2.11 mL	4.22 mL
10 mM	0.21 mL	1.06 mL	2.11 mL
50 mM	0.04 mL	0.21 mL	0.42 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. Breu V, Löffler BM, Clozel M. In vitro characterization of Ro 46-2005, a novel synthetic non-peptide endothelin antagonist of ETA and ETB receptors. FEBS Lett. 1993 Nov 15;334(2):210-4. doi: 10.1016/0014-5793(93)81713-a. PMID: 8224248.
2. Clozel M, Breu V, Burri K, Cassal JM, Fischli W, Gray GA, Hirth G, Löffler BM, Müller M, Neidhart W, et al. Pathophysiological role of endothelin revealed by the first orally active endothelin receptor antagonist. Nature. 1993 Oct 21;365(6448):759-61. doi: 10.1038/365759a0. PMID: 8413655.

In vivo study

1. Sakamoto S, Aso T, Masuda H, Goto M, Tamaoki S, Azuma H. Gestational changes in endothelin-1-induced receptors and myometrial contractions in rat. Mol Hum Reprod. 1999 Mar;5(3):270-6. doi: 10.1093/molehr/5.3.270. PMID: 10333362.

7. Bioactivity
Biological target:

Ro 46-2005 is an ET receptor antagonist that inhibits the specific binding of 125I-ET-1 to human vascular smooth muscle cells with IC50 of 220 nM. Ro 46-2005 proves to be equipotent (IC50 200-500 nM) for inhibiting [125I]ET-1 binding on tETA and ETB. Ro 46-2005 inhibits the functional consequences of ET-1 stimulation.

In vitro activity

Product data sheet

Ro 46-2005 was equipotent (IC50 200-500 nM) for inhibiting [125]ET-1 binding on the ET receptor subtypes ETA and ETB. Ro 46-2005 also inhibited the functional consequences of ET-1 stimulation. The ET-1 induced release of arachidonic acid from rat mesangial cells was inhibited with an IC50 of 1.8 microM.

Reference: FEBS Lett. 1993 Nov 15;334(2):210-4. https://pubmed.ncbi.nlm.nih.gov/8224248/

In vivo activity

In rats, the specific [125I]-ET-1 binding in non-pregnant and pregnant myometrium was completely inhibited by unlabelled ET-1 and Ro 46-2005.

Reference: Mol Hum Reprod. 1999 Mar;5(3):270-6. https://pubmed.ncbi.nlm.nih.gov/10333362/

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.