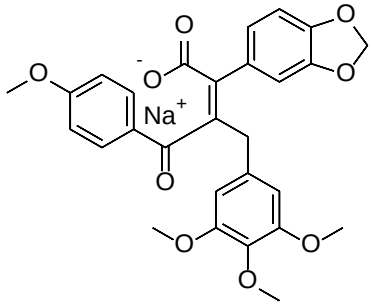
Product data sheet

MedKoo Cat#: 532448 Name: PD-156707 CAS: 162412-70-6 Chemical Formula: $C_{28}H_{25}NaO_9$ Exact Mass: 528.1396 Molecular Weight: 528.4888	
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:
PD-156707 is an endothelin A receptor-selective antagonist.

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	1.89 mL	9.46 mL	18.92 mL
5 mM	0.38 mL	1.89 mL	3.78 mL
10 mM	0.19 mL	0.95 mL	1.89 mL
50 mM	0.04 mL	0.19 mL	0.38 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. Maguire JJ, Davenport AP. The therapeutic potential of PD156707 and related butenolide endothelin antagonists. Expert Opin Investig Drugs. 1999 Jan;8(1):71-8. doi: 10.1517/13543784.8.1.71. PMID: 15992060.
2. Harland SP, Kuc RE, Pickard JD, Davenport AP. Expression of endothelin(A) receptors in human gliomas and meningiomas, with high affinity for the selective antagonist PD156707. Neurosurgery. 1998 Oct;43(4):890-8; discussion 898-9. doi: 10.1097/00006123-199810000-00097. PMID: 9766317.

In vivo study

1. Paradis AN, Gay MS, Wilson CG, Zhang L. Newborn hypoxia/anoxia inhibits cardiomyocyte proliferation and decreases cardiomyocyte endowment in the developing heart: role of endothelin-1. PLoS One. 2015 Feb 18;10(2):e0116600. doi: 10.1371/journal.pone.0116600. PMID: 25692855; PMCID: PMC4334650.
2. Wedgwood S, McMullan DM, Bekker JM, Fineman JR, Black SM. Role for endothelin-1-induced superoxide and peroxynitrite production in rebound pulmonary hypertension associated with inhaled nitric oxide therapy. Circ Res. 2001 Aug 17;89(4):357-64. doi: 10.1161/hh1601.094983. PMID: 11509453.

7. Bioactivity
Biological target:

PD-156707 is an endothelin A receptor-selective antagonist.

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In vitro activity

PD156707 (Parke-Davis) is one of a series of novel, orally-active butenolide endothelin antagonists and is highly selective for the ETA receptor. PD156707 exhibits subnanomolar affinity and greater than 1000-fold selectivity for human ETA receptors and potently inhibits ET-1-mediated vasoconstriction in human isolated blood vessels.

Reference: Expert Opin Investig Drugs. 1999 Jan;8(1):71-8. https://pubmed.ncbi.nlm.nih.gov/15992060/

In vivo activity

Newborn rats were exposed to anoxia twice daily from postnatal day 1 to 3, and hearts were isolated and studied at postnatal day 4 (P4), 7 (P7), and 14 (P14). Newborn administration of PD156707, an ETA-receptor antagonist, significantly increased cardiomyocyte proliferation at P4 and cell size at P7, resulting in an increase in the heart to body weight ratio in P7 neonates. In addition, PD156707 abrogated the anoxia-mediated effects.

Reference: PLoS One. 2015 Feb 18;10(2):e0116600. https://pubmed.ncbi.nlm.nih.gov/25692855/

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.