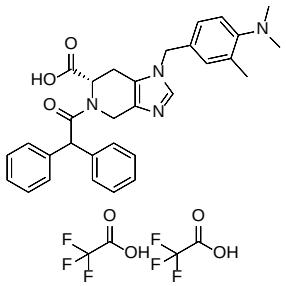
Product data sheet

MedKoo Cat#: 526641 Name: PD-123319 TFA salt CAS: 136676-91-0 (TFA) Chemical Formula: $C_{35}H_{34}F_6N_4O_7$ Molecular Weight: 736.6684	
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-123319 is a selective, nonpeptide AT2R antagonist (IC50 = 5.6 nM vs. 100 nM for AT1R). PD-123319 has been used to selectively examine the specific roles for AT1R and AT2R in hypertensive and other vascular research-related models..

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	40.72
DMSO	25.0	33.94
Ethanol	30.0	40.72
PBS (pH 7.2)	10.0	13.57
Water	43.53	59.09

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	**1 mg**	**5 mg**	**10 mg**
1 mM	1.36 mL	6.79 mL	13.57 mL
5 mM	0.27 mL	1.36 mL	2.72 mL
10 mM	0.14 mL	0.68 mL	1.36 mL
50 mM	0.03 mL	0.14 mL	0.27 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. Matsushita K, Wu Y, Pratt RE, Dzau VJ. Blockade of angiotensin II type 2 receptor by PD123319 inhibits osteogenic differentiation of human mesenchymal stem cells via inhibition of extracellular signal-regulated kinase signaling. J Am Soc Hypertens. 2015 Jul;9(7):517-25. doi: 10.1016/j.jash.2015.06.006. Epub 2015 Jun 12. PMID: 26188399.

In vivo study

1. Kilic A, Ustunova S, Usta C, Bulut H, Meral I, Demirci Tansel C, Gurel Gurevin E. Angiotensin II type 2 receptor blocker PD123319 has more beneficial effects than losartan on ischemia-reperfusion injury and oxidative damage in isolated rat heart. Can J Physiol Pharmacol. 2019 Dec;97(12):1124-1131. doi: 10.1139/cjpp-2019-0076. Epub 2019 Jul 30. PMID: 31361968.
2. Zizzo MG, Caldara G, Bellanca A, Nuzzo D, Di Carlo M, Serio R. PD123319, angiotensin II type II receptor antagonist, inhibits oxidative stress and inflammation in 2, 4-dinitrobenzene sulfonic acid-induced colitis in rat and ameliorates colonic contractility. Inflammopharmacology. 2020 Feb;28(1):187-199. doi: 10.1007/s10787-019-00619-z. Epub 2019 Jul 18. PMID: 31321575.

7. Bioactivity
Biological target:

Product data sheet

PD 123319 (ditrifluoroacetate) is a potent, selective AT2 angiotensin II receptor antagonist with IC50 of 34 nM.

In vitro activity

Human MSCs were differentiated into osteoblasts. Expression of AT2R was significantly increased during osteogenesis, whereas the expression of Ang II type 1 receptors was not significantly changed. Incubation with the AT2R blocker PD123319 with or without Ang II significantly inhibited calcium deposition, whereas type 1 receptor blocker valsartan had no significant effect. PD123319 inhibited extracellular signal-regulated kinase (ERK) phosphorylation in the osteogenic process, whereas valsartan had no effect. Furthermore, PD123319 combined with Ang II also inhibited acute ERK phosphorylation in MSCs induced by insulin.

Reference: J Am Soc Hypertens. 2015 Jul;9(7):517-25. https://pubmed.ncbi.nlm.nih.gov/26188399/

In vivo activity

This study aimed to determine the effects of losartan and PD123319 in ischemia-reperfusion (IR) injury in isolated perfused rat heart. A partial recovery of cardiodynamic parameters was observed in all treatment groups. A significant increase in oxidative stress parameters were seen in the IR group, whereas all treatment groups exhibited lower increase. Furthermore, levels of all antioxidant parameters were significantly lower in the IR group, but higher in the treatment groups. Effects on all parameters were much more remarkable in the PD123319 group.

Reference: Can J Physiol Pharmacol. 2019 Dec;97(12):1124-1131. https://pubmed.ncbi.nlm.nih.gov/31361968/

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.