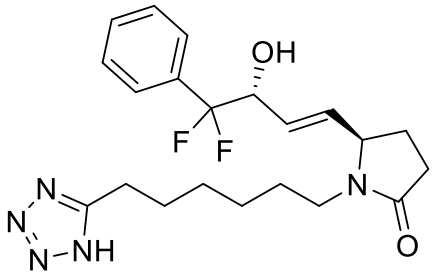
Product data sheet

MedKoo Cat#: 532105 Name: L902688 CAS: 634193-54-7 Chemical Formula: $C_{21}H_{27}F_2N_5O_2$ Exact Mass: 419.2133 Molecular Weight: 419.4768	
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:
L-902,688 is a highly potent agonist of the human PGE2 receptor, EP4. L902688 demonstrates a Ki value of 0.38 nM and an EC50 value of 0.6 nM and is >4,000-fold selective for EP4 over other EP and prostanoid receptors. Note: This product is supplied as methanol solution

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	71.52
DMSO	30.0	71.52
Ethanol	30.0	71.52
Ethanol:PBS (pH 7.2) (1:1)	0.5	1.19

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	**1 mg**	**5 mg**	**10 mg**
1 mM	2.38 mL	11.92 mL	23.84 mL
5 mM	0.48 mL	2.38 mL	4.77 mL
10 mM	0.24 mL	1.19 mL	2.38 mL
50 mM	0.05 mL	0.24 mL	0.48 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. van Geffen C, Deißler A, Beer-Hammer S, Nürnberg B, Handgretinger R, Renz H, Hartl D, Kolahian S. Myeloid-Derived Suppressor Cells Dampen Airway Inflammation Through Prostaglandin E2 Receptor 4. Front Immunol. 2021 Jul 12;12:695933. doi: 10.3389/fimmu.2021.695933. PMID: 34322123; PMCID: PMC8311661.
2. Gill SK, Yao Y, Kay LJ, Bewley MA, Marriott HM, Peachell PT. The anti-inflammatory effects of PGE2 on human lung macrophages are mediated by the EP4 receptor. Br J Pharmacol. 2016 Nov;173(21):3099-3109. doi: 10.1111/bph.13565. Epub 2016 Sep 6. PMID: 27460634; PMCID: PMC5056231.

In vivo study

1. Li HH, Hsu HH, Chang GJ, Chen IC, Ho WJ, Hsu PC, Chen WJ, Pang JS, Huang CC, Lai YJ. Prostanoid EP4 agonist L-902,688 activates PPARγ and attenuates pulmonary arterial hypertension. Am J Physiol Lung Cell Mol Physiol. 2018 Mar 1;314(3):L349-L359. doi: 10.1152/ajplung.00245.2017. Epub 2017 Nov 16. PMID: 29146573.

2. Lai YJ, Chen IC, Li HH, Huang CC. EP4 Agonist L-902,688 Suppresses EndMT and Attenuates Right Ventricular Cardiac Fibrosis in Experimental Pulmonary Arterial Hypertension. Int J Mol Sci. 2018 Mar 3;19(3):727. doi: 10.3390/ijms19030727. PMID: 29510514; PMCID: PMC5877588.

7. Bioactivity

Biological target:

L-902688 is a potent, selective and orally active EP4 receptor agonist with a K_i of 0.38 nM and an EC_{50} of 0.6 nM.

In vitro activity

This study demonstrates that the selective EP4 agonist L-902,688 increased the number and suppressive activity of MDSCs (myeloid-derived suppressor cells) through arginase-1 and nitric oxide synthase-2.

Reference: Front Immunol. 2021 Jul 12;12:695933. https://pubmed.ncbi.nlm.nih.gov/34322123/

In vivo activity

L-902,688 attenuated pulmonary arterial remodeling in hypoxic PAH (pulmonary arterial hypertension) mice and MCT-induced PAH rats; therefore, we conclude that the selective EP4 agonist L-902,688 reverses vascular remodeling by activating PPARγ.

Reference: Am J Physiol Lung Cell Mol Physiol. 2018 Mar 1;314(3):L349-L359. https://pubmed.ncbi.nlm.nih.gov/29146573/

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.