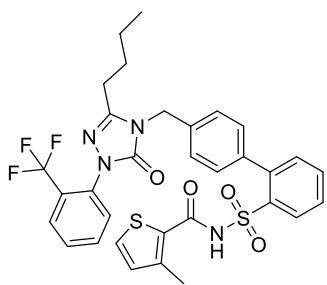


Product data sheet



MedKoo Cat#: 558725 Name: L-161982 CAS: 147776-06-5 Chemical Formula: C ₃₂ H ₂₉ F ₃ N ₄ O ₄ S ₂ Exact Mass: 654.1582 Molecular Weight: 654.7232	
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-161982 is a selective inhibitor of the EP4 PGE2 receptor which enhances oxaliplatin-induced apoptosis in OXR cells, reduces expression of the colonic stem cell markers, CD133 and CD44, and inhibits tumor sphere formation.

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	20.0	30.55
DMSO	37.74	57.64

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.53 mL	7.64 mL	15.27 mL
5 mM	0.31 mL	1.53 mL	3.05 mL
10 mM	0.15 mL	0.76 mL	1.53 mL
50 mM	0.03 mL	0.15 mL	0.31 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. Li X, Yang B, Han G, Li W. The EP4 antagonist, L-161,982, induces apoptosis, cell cycle arrest, and inhibits prostaglandin E2-induced proliferation in oral squamous carcinoma Tca8113 cells. *J Oral Pathol Med.* 2017 Nov;46(10):991-997. doi: 10.1111/jop.12572. Epub 2017 Apr 11. PMID: 28342204.

2. Cherukuri DP, Chen XB, Goulet AC, Young RN, Han Y, Heimark RL, Regan JW, Meuillet E, Nelson MA. The EP4 receptor antagonist, L-161,982, blocks prostaglandin E2-induced signal transduction and cell proliferation in HCA-7 colon cancer cells. *Exp Cell Res.* 2007 Aug 15;313(14):2969-79. doi: 10.1016/j.yexcr.2007.06.004. Epub 2007 Jun 22. PMID: 17631291; PMCID: PMC2706013.

In vivo study

1. Liu S, Wang Q, Li Z, Ma L, Li T, Li Y, Wang N, Liu C, Xue P, Wang C. TRPV1 Channel Activated by the PGE2/EP4 Pathway Mediates Spinal Hypersensitivity in a Mouse Model of Vertebral Endplate Degeneration. *Oxid Med Cell Longev.* 2021 Aug 21;2021:9965737. doi: 10.1155/2021/9965737. PMID: 34471470; PMCID: PMC8405310.

2. Chen L, Wu X, Zhong J, Li D. L161982 alleviates collagen-induced arthritis in mice by increasing Treg cells and down-regulating Interleukin-17 and monocyte-chemoattractant protein-1 levels. *BMC Musculoskelet Disord.* 2017 Nov 16;18(1):462. doi: 10.1186/s12891-017-1819-3. PMID: 29145862; PMCID: PMC5691865.

Product data sheet



7. Bioactivity

Biological target:

L-161982 is a selective EP4 receptor antagonist.

In vitro activity

The EP4 receptor agonist, PGE1-OH, could mimick PGE2 rescued the inhibitory effect of celecoxib and induced cell growth via ERK phosphorylation, and the EP4 receptor antagonist, L-161,982, completely blocked PGE2-stimulated ERK phosphorylation and proliferation of Tca8113 cells. Furthermore, L-161,982 may induce apoptosis and block cell cycle progression at s phase by upregulating Bax and p21 protein levels and by downregulating Bcl-2, CDK2, and cyclin A2 protein levels.

Reference: J Oral Pathol Med. 2017 Nov;46(10):991-997. <https://pubmed.ncbi.nlm.nih.gov/28342204/>

In vivo activity

CIA (collagen-induced arthritis) mice treated with L161982 showed reduced arthritis scores, joint swellings, cracked cartilage surface, and less hyperplasia in the connective tissue of the articular cavity. Plasma and tissue IL-17 and MCP-1 decreased, while the proportion of Treg cells is increased both in the spleen and lymph nodes of CIA mice.

Reference: BMC Musculoskelet Disord. 2017 Nov 16;18(1):462. <https://pubmed.ncbi.nlm.nih.gov/29145862/>

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.