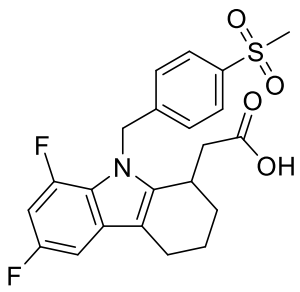
Product data sheet

MedKoo Cat#: 525962 Name: L-670596 CAS: 121083-05-4 Chemical Formula: $C_{22}H_{21}F_2NO_4S$ Exact Mass: 433.1159 Molecular Weight: 433.4698	
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-670596 is a potent and selective thromboxane A2/prostaglandin endoperoxide receptor antagonist, also showing ALDH1A1 specific inhibitory activity.

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	2.31 mL	11.53 mL	23.07 mL
5 mM	0.46 mL	2.31 mL	4.61 mL
10 mM	0.23 mL	1.15 mL	2.31 mL
50 mM	0.05 mL	0.23 mL	0.46 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. Crankshaw D. Effects of the isoprostane, 8-epi-prostaglandin F2 alpha, on the contractility of the human myometrium in vitro. Eur J Pharmacol. 1995 Oct 16;285(2):151-8. doi: 10.1016/0014-2999(95)00398-5. PMID: 8566133.

2. Fernandes B, Crankshaw D. Functional characterization of the prostanoid DP receptor in human myometrium. Eur J Pharmacol. 1995 Sep 5;283(1-3):73-81. doi: 10.1016/0014-2999(95)00288-v. PMID: 7498323.

In vivo study

1. Jankov RP, Belcastro R, Ovcina E, Lee J, Massaeli H, Lye SJ, Tanswell AK. Thromboxane A(2) receptors mediate pulmonary hypertension in 60% oxygen-exposed newborn rats by a cyclooxygenase-independent mechanism. Am J Respir Crit Care Med. 2002 Jul 15;166(2):208-14. doi: 10.1164/rccm.200112-124OC. PMID: 12119234.

2. Nuttall GA, Murray MJ, Bowie EJ. Protamine-heparin-induced pulmonary hypertension in pigs: effects of treatment with a thromboxane receptor antagonist on hemodynamics and coagulation. Anesthesiology. 1991 Jan;74(1):138-45. PMID: 1824742.

7. Bioactivity
Biological target:
Potent, selective thromboxane A2/prostaglandin endoperoxide antagonist.

Product data sheet

In vitro activity

Responses to 8-epi-prostaglandin F2 alpha were unaffected by the selective DP receptor antagonist BW A868C (3-benzyl-5-(6-carboxyhexyl)-1-(2- cyclohexyl-2-hydroxyethylamino)hydantoin) at 50 nM but were blocked by the selective TP receptor antagonist L670596 ((-)6,8-difluoro-9-p-methylsulfonyl benzyl-1,2,3,4- tetrahydrocarbazol-1-yl-acetic acid) at 50 nM.

Reference: Eur J Pharmacol. 1995 Oct 16;285(2):151-8. https://pubmed.ncbi.nlm.nih.gov/8566133/

In vivo activity

Newborn rat pups received daily intraperitoneal injections of L670596, a competitive TX A(2) receptor antagonist, or 5,5-dimethyl-3-(3-fluorophenyl)4-(4-methylsulfonyl)phenyl-2(5H)-furanone (DFU), a cyclooxygenase-2 inhibitor, during 14 days of 60% O(2) or air exposure. L670596, but not DFU, prevented 60% O(2)-mediated right ventricular and small pulmonary vessel smooth muscle hypertrophy. Lung ET-1 content was significantly reduced by L670596 in 60% O(2)-exposed animals.

Reference: Am J Respir Crit Care Med. 2002 Jul 15;166(2):208-14. https://pubmed.ncbi.nlm.nih.gov/12119234/