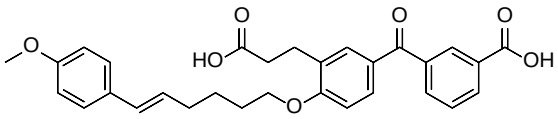
Product data sheet

MedKoo Cat#: 525522 Name: LY 223982 CAS: 117423-74-2 Chemical Formula: $C_{30}H_{30}O_7$ Exact Mass: 502.1992 Molecular Weight: 502.563	
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:
LY 223982 is a potent BLT1 receptor antagonist. It inhibits the specific binding of radiolabeled-LTB4 to isolated human neutrophils with an IC50 value of 13.2 nM. LY223982 inhibits the leukotriene B4 (LTB4)-induced aggregation of guinea pig and human neutrophils with IC50 values of 74 and 100 nM, respectively.

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	59.69
DMF:PBS (pH 7.2) (1:1)	0.5	0.99
DMSO	60.0	119.39
Ethanol	0.1	0.20

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.99 mL	9.95 mL	19.90 mL
5 mM	0.40 mL	1.99 mL	3.98 mL
10 mM	0.20 mL	0.99 mL	1.99 mL
50 mM	0.04 mL	0.20 mL	0.40 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. Falgueyret J, Riendeau D. LTA(4)-derived 5-oxo-eicosatetraenoic acid: pH-dependent formation and interaction with the LTB(4) receptor of human polymorphonuclear leukocytes. Biochim Biophys Acta. 2000 Feb 24;1484(1):51-8. doi: 10.1016/s1388-1981(99)00198-5. PMID: 10685030.
2. Rainger GE, Rowley AF, Nash GB. Adhesion-dependent release of elastase from human neutrophils in a novel, flow-based model: specificity of different chemotactic agents. Blood. 1998 Dec 15;92(12):4819-27. PMID: 9845549.

In vivo study

1. Jackson WT, Boyd RJ, Froelich LL, Mallett BE, Gapinski DM. Specific inhibition of leukotriene B4-induced neutrophil activation by LY223982. J Pharmacol Exp Ther. 1992 Dec;263(3):1009-14. PMID: 1335049.
2. Griswold DE, Martin L, Ventre J, Meunier L, Perry L. Technique for quantification of LTB4-induced changes in peripheral granulocyte counts in vivo in the rabbit. J Pharmacol Methods. 1991 Jul;25(4):319-28. doi: 10.1016/0160-5402(91)90031-y. PMID: 1653383.

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7. Bioactivity

Biological target:

LY223982 is a potent and specific inhibitor of leukotriene B4 receptor, with an IC_{50} of 13.2 nM against [3H]LTB4 binding to LTB4 receptor.

In vitro activity

5-Oxo-ETE was isolated from the alkaline hydrolysis products of LTA(4) in order to evaluate its effects on human polymorphonuclear (PMN) leukocytes. Pretreatment of the cells with LTB(4) totally abolished the calcium response induced by 5-oxo-ETE. In contrast, the preincubation with 5-oxo-ETE did not affect the calcium mobilization induced by LTB(4). The calcium response induced by 5-oxo-ETE was totally inhibited by the specific LTB(4) receptor antagonist LY223982.

Reference: Biochim Biophys Acta. 2000 Feb 24;1484(1):51-8. https://pubmed.ncbi.nlm.nih.gov/10685030/

In vivo activity

LY223982, (E)-5-(3-carboxybenzoyl)-2-((6-(4-methoxyphenyl)-5- hexenyl)oxy)benzenepropanoic acid, is a newly discovered potent inhibitor of specific binding of leukotriene B4 (LTB4) to its receptor on human neutrophils.This study demonstrated that the compound is also a specific antagonist of LTB4-induced neutrophil activation under both in vitro and in vivo conditions. LY223982 inhibited transient leukopenia induced in rabbits with LTB4 (ED50, 3 mg/kg) but not with FMLP.

Reference: J Pharmacol Exp Ther. 1992 Dec;263(3):1009-14. https://pubmed.ncbi.nlm.nih.gov/1335049/

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.