

LeuRS-IN-1 biochemical

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CATALOG #
AAA227624

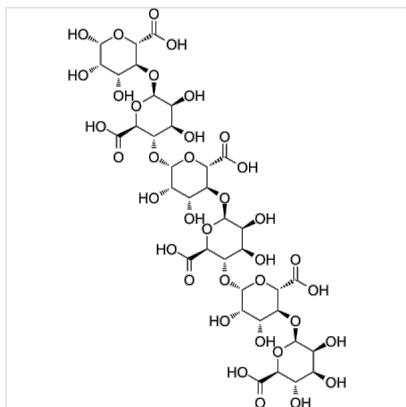
PRODUCT SYNONYMS

LeuRS-IN-1; LeuRS-IN-1 biochemical

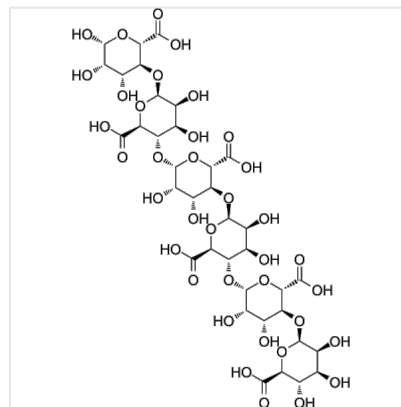
PRODUCT SPECIFICATIONS

Purity/Purification	98%
CAS	1364914-72-6
Targets&IC50	M.tb LeuRS:0.06 uM (IC50), M.tb LeuRS:0.075 uM (Kd), HepG2 protein synthesis:19.6 uM (EC50), human cytoplasmic LeuRS:38.8 uM (IC50)
Solubility	<1mg/ml refers to the product slightly soluble or insoluble
In vitro	LeuRS-IN-1 (100 mg/kg; orally daily for 14 days) reduces lung CFU value in acute tuberculosis (TB) mice[1]. LeuRS-IN-1 (33mg/kg; orally 5 days a week for 4 weeks) reduces lung and spleen CFU values in chronic TB mice[1]. Murine pharmacokinetic parameters[1]: Administration Dose (mg/kg) C max (ug/ml) at 5 min CL (ml/h/kg) V ss (ml/kg) MRT (h) AUC 0-infinity (h · ug/ml) alpha-t 1/2 (h)(% AUC) beta-t 1/2 (h)(% AUC) i.v. 30 13.6 582 3,142 5.4 51.6 0.10 (2) 3.83 (98) Administration Dose (mg/kg) C max (ug/ml) T max (h) AUC 0-24 (h · ug/ml) Terminal t 1/2 (h) Bioavailability (%) (h · ug/ml) Mouse PPB (%) p.o. 30 6.4 0.25 47.5 3.1 9.2 23 Animal Model: Murine GKO (C57BL/6-lfngtm1ts) model of acute TB[1]. Dosage: 100 mg/kg. Administration: Orally daily for 14 days after 10 days of infection (start) with M. tuberculosis Erdman. Result: Reduced lung CFU value in mice. Animal Model: Murine BALB/c model of chronic TB infection[1]. Dosage: 33mg/kg. Administration: Orally 5 days a week for 4 weeks after infection with M. tuberculosis Erdman with a low-dose aerosol 21 days prior (start). Result: Reduced lung and spleen CFU values in mice.
Preparation and Storage	Powder: -20 degree C for 3 years In solvent: -80 degree C for 2 years

IMAGES


Structure

D-Hexamannuronic acid, CAS 183668-52-2


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ADDITIONAL INFORMATION

Related Product Information for LeuRS-IN-1 biochemical	LeuRS-IN-1 is a potent, orally active M. tuberculosis leucyl-tRNA synthetase (M.tb LeuRS) inhibitor. LeuRS-IN-1 has IC 50 and Kd values of 0.06 uM, 0.075 uM for M.tb LeuRS, respectively. LeuRS-IN-1 inhibits human cytoplasmic LeuRS (IC 50 =38.8 uM), and HepG2 protein synthesis (EC 50 =19.6 uM).
References	1. Heyraud A, et, al. HPLC analysis of saturated or unsaturated oligoguluronates and oligomannuronates. Application to the determination of the action pattern of Halotis tuberculata alginate lyase. Carbohydr Res. 1996 Sep 23; 291:115-26. 2. Iwamoto M, et, al. Structure-activity relationship of alginate oligosaccharides in the induction of cytokine production from RAW264.7 cells. FEBS Lett. 2005 Aug 15; 579(20): 4423-9. 3. Geng M, et, al. Application of sodium alginate oligose and derivative to treatment of pain. CN106344595A. 4. Geng M, et, al. Application of sodium alginate oligose and derivative to treatment of vascular dementia. CN106344593A.

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://www.aaabiotech.com/biochemical/leurs-in-1/227624>