

# Product data sheet



MedKoo Cat#: 532084 Name: L-755507 CAS: 159182-43-1 Chemical Formula: C <sub>30</sub> H <sub>40</sub> N <sub>4</sub> O <sub>6</sub> S Exact Mass: 584.2669 Molecular Weight: 584.732	
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-755507 is a potent  $\beta$ 3-adrenergic receptor partial agonist > 1000-fold selective over  $\beta$ 1- and  $\beta$ 2-adrenoceptors (EC<sub>50</sub> values are 0.43, 580 and > 10000 nM for activation of cloned human  $\beta$ 3-,  $\beta$ 1- and  $\beta$ 2-adrenoceptors respectively). L-755507 stimulates lipolysis in rhesus adipocytes in vitro (EC<sub>50</sub> = 3.9 nM).

## 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	51.31
DMSO	70.87	121.20
Ethanol	44.24	75.65
Ethanol:PBS (pH 7.2) (1:3)	0.25	0.43

## 4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.71 mL	8.55 mL	17.10 mL
5 mM	0.34 mL	1.71 mL	3.42 mL
10 mM	0.17 mL	0.86 mL	1.71 mL
50 mM	0.03 mL	0.17 mL	0.34 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. Singh A, Kumar A, Kumar P, Nayak N, Bhardwaj T, Giri R, Garg N. A novel inhibitor L755507 efficiently blocks c-Myc-MAX heterodimerization and induces apoptosis in cancer cells. *J Biol Chem.* 2021 Jul;297(1):100903. doi: 10.1016/j.jbc.2021.100903. Epub 2021 Jun 23. PMID: 34157284; PMCID: PMC8294579.
2. Kimura K, Sasaki N, Asano A, Mizukami J, Kayahashi S, Kawada T, Fushiki T, Morimatsu M, Yoshida T, Saito M. Mutated human beta3-adrenergic receptor (Trp64Arg) lowers the response to beta3-adrenergic agonists in transfected 3T3-L1 preadipocytes. *Horm Metab Res.* 2000 Mar;32(3):91-6. doi: 10.1055/s-2007-978597. PMID: 10786926.

### In vivo study

1. Kohout TA, Takaoka H, McDonald PH, Perry SJ, Mao L, Lefkowitz RJ, Rockman HA. Augmentation of cardiac contractility mediated by the human beta(3)-adrenergic receptor overexpressed in the hearts of transgenic mice. *Circulation.* 2001 Nov 13;104(20):2485-91. doi: 10.1161/hc4501.098933. PMID: 11705829.

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## 7. Bioactivity

### Biological target:

L755507 is a potent, selective agonist of  $\beta$ 3-AR with an IC<sub>50</sub> of 35 nM.

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### In vitro activity

L755507 successfully disrupts the c-Myc-MAX heterodimer, resulting in decreased expression of c-Myc target genes. Spectroscopic and computational experiments demonstrated that L755507 binds to the c-Myc peptide and thereby stabilizes the helix-loop-helix conformation of the c-Myc transcription factor. Taken together, this study suggests that L755507 effectively inhibits the c-Myc-MAX heterodimerization and may be used for further optimization to develop a c-Myc-targeted antineoplastic drug.

Reference: J Biol Chem. 2021 Jul;297(1):100903. <https://pubmed.ncbi.nlm.nih.gov/34157284/>

### In vivo activity

Similarly, stimulation with the selective human beta(3)AR agonist L-755,507 significantly increased contractility in the TGbeta(3) mice (160%), with no effect in wild-type mice, as determined by hemodynamic measurements and by end-systolic pressure-volume relations.

Reference: Circulation. 2001 Nov 13;104(20):2485-91. <https://pubmed.ncbi.nlm.nih.gov/11705829/>

*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.*