产品名称：L755,507
产品别名：L755507

<table>
<tr><td colspan="2">生物活性：</td></tr>
<tr><td>Description</td><td>L755507 is a potent, selective agonist of β_3-AR with an IC_{50} of 35 nM.</td></tr>
<tr><td>IC_{50} & Target</td><td>IC50: 35 nM (β_3-AR)[1]</td></tr>
<tr><td>In Vitro</td><td>L755507 causes a robust concentration-dependent increase in cAMP accumulation (pEC50 values of 8.5 and 12.3, respectively). Maximal cAMP accumulation with zinterol and L755507 is increased after pretreatment with pertussis toxin. In contrast to cAMP, zinterol, L755507 and L748337 increase phosphorylation of extracellular signal-regulated kinase 1/2 (Erk1/2) with very high potency (pEC50 values of 10.9, 11.7 and 11.6)[1]. L755507 and Scr7 do not reduce cell viability significantly. Scr7 does not affect cell cycle distribution in a range of 10 to 200 μM. L755507 significantly decreases the proportion of cells in the G2/M phase at 10 μM or 40 μM and increases the S-phase cells at 10 μM compare with the DMSO-treated cells[2].</td></tr>
<tr><td>Solvent&Solubility</td><td>
In Vitro:
DMSO : ≥ 100 mg/mL (171.02 mM)
* "≥" means soluble, but saturation unknown.
<table>
<tr><td rowspan="4">Preparing Stock Solutions</td><td>Solvent / Mass / Concentration</td><td>1 mg</td><td>5 mg</td><td>10 mg</td></tr>
<tr><td>1 mM</td><td>1.7102 mL</td><td>8.5510 mL</td><td>17.1019 mL</td></tr>
<tr><td>5 mM</td><td>0.3420 mL</td><td>1.7102 mL</td><td>3.4204 mL</td></tr>
<tr><td>10 mM</td><td>0.1710 mL</td><td>0.8551 mL</td><td>1.7102 mL</td></tr>
</table>
*请根据产品在不同溶剂中的溶解度选择合适的溶剂配制储备液；一旦配成溶液，请分装保存，避免反复冻融造成的产品失效。
储备液的保存方式和期限：-80°C, 6 months; -20°C, 1 month。-80°C 储存时，请在 6 个月内使用，-20°C 储存时，请在 1 个月内使用。
In Vivo:
请根据您的实验动物和给药方式选择适当的溶解方案。以下溶解方案都请先按照 In Vitro 方式配制澄清的储备液，再依次添加助溶剂：
——为保证实验结果的可靠性，澄清的储备液可以根据储存条件，适当保存；体内实验的工作液，建议您现用现配，当天使用； 以下溶剂前显示的百分比是指该溶剂在您配制终溶液中的体积占比；如在配制过程中出现沉淀、析出现象，可以通过加热和/或超声的方式助溶
1.请依序添加每种溶剂： 10% DMSO→40% PEG300 →5% Tween-80 → 45% saline
Solubility: ≥ 2.5 mg/mL (4.28 mM); Clear solution
此方案可获得 ≥ 2.5 mg/mL (4.28 mM，饱和度未知) 的澄清溶液。
以 1 mL 工作液为例，取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 400 μL PEG300 中，混合均匀；向上述体系中加入 50 μL Tween-80，混合均匀；然后继续加入 450 μL 生理盐水定容至 1 mL。
2.请依序添加每种溶剂： 10% DMSO→ 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (4.28 mM); Clear solution
此方案可获得 ≥ 2.5 mg/mL (4.28 mM，饱和度未知) 的澄清溶液。
以 1 mL 工作液为例，取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 900 μL 20% 的 SBE-β-CD 生理盐水水溶液中，混合均匀。
</td></tr>
</table>

	3.请依序添加每种溶剂： 10% DMSO →90% corn oil Solubility: ≥ 2.5 mg/mL (4.28 mM); Clear solution 此方案可获得 ≥ 2.5 mg/mL (4.28 mM，饱和度未知) 的澄清溶液，此方案不适用于实验周期在半个月以上的实验。 以 1 mL 工作液为例，取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 900 μL 玉米油中，混合均匀。
References	[1]. Sato M, et al. The beta3-adrenoceptor agonist 4-[[(Hexylamino)carbonyl]amino]-N-[4-[2-[[(2S)-2-hydroxy-3-(4-hydroxyphenoxy)propyl]amino]ethyl]-phenyl]-benzenesulfonamide (L755507) and antagonist (S)-N-[4-[2-[[3-[3-(acetamidomethyl)phenoxy]-2-hydroxypropyl]amino]-ethyl]phenyl]benzenesulfonamide (L748337) activate different signaling pathways in Chinese hamster ovary-K1 cells stably expressing the human beta3-adrenoceptor. Mol Pharmacol. 2008 Nov;74(5):1417-28. [2]. Guoling Li, et al. Small molecules enhance CRISPR/Cas9-mediated homology-directed genome editing in primary cells. Sci Rep. 2017; 7: 8943.

实验参考：

Cell Assay	The cytosensor microphysiometer is used to measure β_3-AR-mediated increases in ECAR . In brief, CHO β_3 cells are seeded into 12-mm Transwell inserts at 5×10^5 cells/cup and left to adhere overnight. On the day of experiment, cells are equilibrated for 2 h, and cumulative concentration-response curves to L755507, zinterol, or L748337 are constructed in paired sister cells with each concentration of drug exposed to cells for 14 min. Results are expressed as a percentage of the maximal response to L755507. In experiments examining the effect of inhibitors, cells are treated for 30 min before stimulation with appropriate drugs. All drugs are diluted in modified RPMI 1640 medium. These results are expressed as a percentage of the maximal response to L755507, zinterol, or L748337 over basal[1].
References	[1]. Sato M, et al. The beta3-adrenoceptor agonist 4-[[(Hexylamino)carbonyl]amino]-N-[4-[2-[[(2S)-2-hydroxy-3-(4-hydroxyphenoxy)propyl]amino]ethyl]-phenyl]-benzenesulfonamide (L755507) and antagonist (S)-N-[4-[2-[[3-[3-(acetamidomethyl)phenoxy]-2-hydroxypropyl]amino]-ethyl]phenyl]benzenesulfonamide (L748337) activate different signaling pathways in Chinese hamster ovary-K1 cells stably expressing the human beta3-adrenoceptor. Mol Pharmacol. 2008 Nov;74(5):1417-28. [2]. Guoling Li, et al. Small molecules enhance CRISPR/Cas9-mediated homology-directed genome editing in primary cells. Sci Rep. 2017; 7: 8943.