

Small Molecules

L755507

Activates β -3 adrenergic receptors

Catalog # 73992
73994

5 mg
10 mg



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Product Description

L755507 is a potent and selective β -3 adrenergic receptor agonist that demonstrates > 440-fold selectivity over β -1 and β -2 binding (EC_{50} = 0.43, 580, and > 10,000 nM for activation of cloned human β -3-, β -2-, and β -1-adrenoreceptors, respectively; Parmee et al.).

Molecular Name: L755507

Alternative Names: Not applicable

CAS Number: 159182-43-1

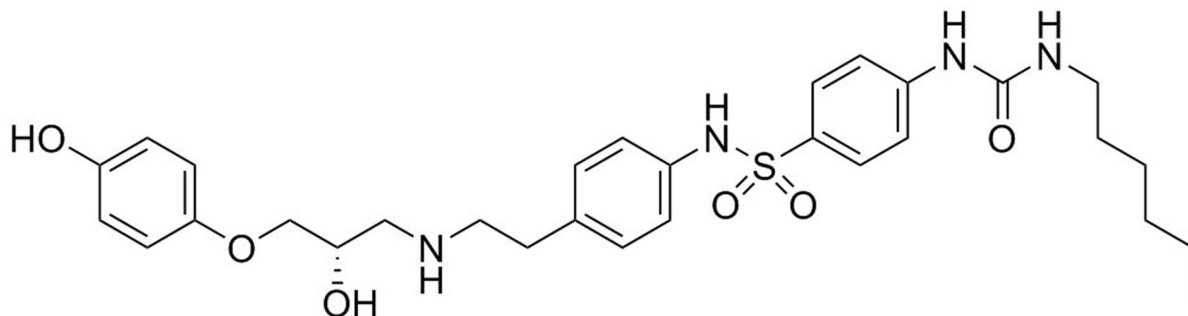
Chemical Formula: $C_{30}H_{40}N_4O_6S$

Molecular Weight: 584.7 g/mol

Purity: \geq 98%

Chemical Name: 4-[[[(hexylamino)carbonyl]amino]-N-[4-[2-[[[(2S)-2-hydroxy-3-(4-hydroxyphenoxy)propyl]amino]ethyl]phenyl]-benzenesulfonamide

Structure:



Properties

Physical Appearance: A crystalline solid

Storage: Product stable at $-20^{\circ}C$ as supplied. Protect product from prolonged exposure to light. For long-term storage store with a desiccant.
Stable as supplied for 12 months from date of receipt.

Solubility: · DMSO \leq 40 mM

· Absolute ethanol \leq 30 mM

For example, to prepare a 10 mM stock solution in DMSO, resuspend 1 mg in 171 μ L of DMSO.

Prepare stock solution fresh before use. Information regarding stability of small molecules in solution has rarely been reported, however, as a general guide we recommend storage in DMSO at $-20^{\circ}C$. Aliquot into working volumes to avoid repeated freeze-thaw cycles. The effect of storage of stock solution on compound performance should be tested for each application.

Compound has low solubility in aqueous media. For use as a cell culture supplement, stock solution should be diluted into culture medium immediately before use. Avoid final DMSO concentration above 0.1% due to potential cell toxicity.

Published Applications

DIFFERENTIATION

- Stimulates lipolysis in human white adipose tissue (Fisher et al.).

GENE EDITING

- Improves the efficiency of homology-directed repair in human induced pluripotent stem cells following CRISPR editing (Yu et al.).

METABOLISM

- Increases metabolism in rhesus monkeys (Fisher et al.).

References

- Fisher MH et al. (1998) A selective human beta3 adrenergic receptor agonist increases metabolic rate in rhesus monkeys. *J Clin Invest* 101(11): 2387–93.
- Parmee ER et al. (1998) Discovery of L-755,507: a subnanomolar human beta 3 adrenergic receptor agonist. *Bioorg Med Chem Lett* 8(9): 1107–12.
- Yu C et al. (2015) Small molecules enhance CRISPR genome editing in pluripotent stem cells. *Cell Stem Cell* 16(2): 142–7.

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