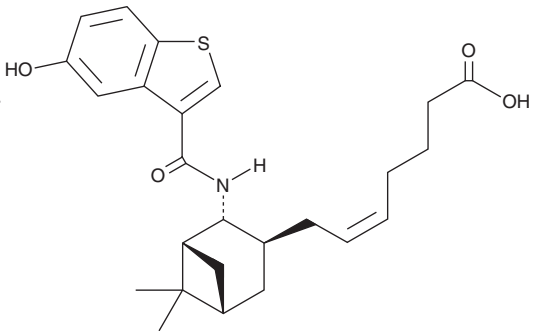
PRODUCT INFORMATION

S-5751

Item No. 10004030



CAS Registry No.:	209268-36-0
Formal Name:	(5Z)-7-[(1R,2R,3S,5S)-2-[[(5-hydroxybenzo[b]thien-3-yl)carbonyl]amino]-6,6-dimethylbicyclo[3.1.1]hept-3-yl]-5-heptenoic acid
MF:	$C_{25}H_{31}NO_4S$
FW:	441.6
Purity:	≥95%
UV/Vis.:	λ_{max}: 221, 269, 317 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly

Laboratory Procedures

S-5751 is supplied as a crystalline solid. A stock solution may be made by dissolving the S-5751 in the solvent of choice. S-5751 is soluble in the organic solvent DMSO, which should be purged with an inert gas, at a concentration of approximately 36 mg/ml.

Description

S-5751 is an antagonist of the prostaglandin D_2 (PGD_2) receptor DP_1 (K_i = 1.6 nM) that shows at least 20-fold selectivity over receptors for thromboxane and prostacyclin, as well as the PGE_2 receptor EP_2.[1,2] Orally administered S-5751 blocks PGD_2-induced plasma exudation in the conjunctiva (ED_{50} = 0.099 mg/kg) and suppresses antigen-induced allergic responses in guinea pigs.[1] S-5751 has been used to distinguish signaling of PGD_2 through its two receptors, DP_1 and DP_2 (also known as CRTH2).[3]

References

1. Arimura, A., Yasui, K., Kishino, J., *et al.* Prevention of allergic inflammation by a novel prostaglandin receptor antagonist, S-5751. *J. Pharmacol. Exp. Ther.* **298(2)**, 411-419 (2001).
2. Tsuri, T., Honma, T., Hiramatsu, Y., *et al.* Bicyclo[2.2.1]heptane and 6,6-dimethylbicyclo[3.1.1]heptane derivatives: Orally active, potent, and selective prostaglandin D_2 receptor antagonists. *J. Med. Chem.* **40(22)**, 3504-3507 (1997).
3. Choi, Y.H., Lee, S.-N., Aoyahi, H., *et al.* The extracellular signal-regulated kinase mitogen-activated protein kinase/ribosomal S6 protein kinase 1 cascade phosphorylates cAMP response element-binding protein to induce MUC5B gene expression *via* D-prostanoid receptor signaling. *J. Biol. Chem.* **286(39)**, 34199-3214 (2011).

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