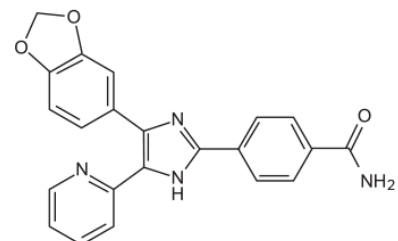


SB431542

Catalog Number: ST10012



Size	5 mg
Description	SB431542 is a potent and selective inhibitor of the transforming growth factor- β (TGF- β) type I receptor activin receptor-like kinase ALK5 (IC_{50} = 94 nM), and its relatives ALK4 and ALK7. It suppresses TGF- β -induced proliferation of human osteosarcoma cells. SB431542 has been shown to stimulate proliferation, differentiation, and sheet formation of ESC-derived endothelial cells.
Molecular Weight	384.39
Molecular Formula	$C_{22}H_{16}N_4O_3$
Chemical Name	4-(5-benzo(1,3)dioxol-5-yl-4-pyridin-2-yl-1H-imidazol-2-yl)benzamide
CAS Number	301836-41-9
PubChem Identifier	4521392
Appearance	White to off-white solid
Purity	>98% by HPLC analysis
Solubility	Soluble in DMSO at 100 mM and ethanol at 10 mM
Reconstitution	<p>For a 10 mM concentrated stock solution of SB431542, reconstitute the compound by adding 1.3 mL of DMSO to the entire contents of vial. If precipitate is observed, warm the solution to 40°C for 2 to 5 minutes.</p> <p>For use in cell culture, warm the medium just prior to adding the reconstituted compound. Once the compound is added, mix and filter-sterilize the medium using a 0.2 μM low-protein binding filter.</p>
Storage and Stability	<p>Solid: Shipped at room temperature. Store at -20°C. Stable for 6 months when stored as directed.</p> <p>Solution: Following reconstitution, store aliquots in tightly sealed vials at -20°C. Avoid repeated freeze-thaw cycles.</p>
References	<p>Laping, N.J., et al. (2002) Inhibition of transforming growth factor (TGF)-beta1-induced extracellular matrix with a novel inhibitor of the TGF-beta type I receptor kinase activity: SB-431542. <i>Mol Pharmacol</i> 62: 58-64. PMID: 12065755.</p> <p>Watabe, T., et al. (2003) TGF-beta receptor kinase inhibitor enhances growth and integrity of embryonic stem cell-derived endothelial cells. <i>J Cell Biol</i> 163: 1303-1311. PMID: 14676305.</p>

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