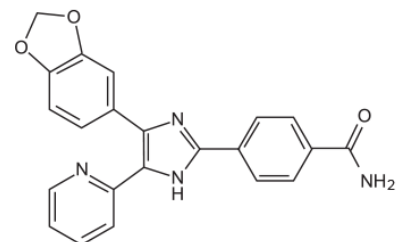


# SB431542

Catalog Number: ST10013



Size	10 mg
Description	SB431542 is a potent and selective inhibitor of the transforming growth factor- $\beta$ (TGF- $\beta$ ) type I receptor activin receptor-like kinase ALK5 ( $IC_{50}$ = 94 nM), and its relatives ALK4 and ALK7. It suppresses TGF- $\beta$ -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 <sub>22</sub> H <sub>16</sub> N <sub>4</sub> O <sub>3</sub>
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 2.6 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 <math>\mu</math>M 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>

## PRODUCT WARRANTY

BioTime, Inc. and/or its subsidiaries warrants its products as set forth in the General Terms and Conditions of Sale found on ESI BIO's website at [www.esibio.com/termsandconditions](http://www.esibio.com/termsandconditions).

©2014 BioTime, Inc. All rights reserved. ESI BIO, ESI BIO logo and all other trademarks mentioned herein are the property of BioTime, Inc. and/or its subsidiaries or their respective owners.

For support visit [www.esibio.com/support](http://www.esibio.com/support) or email [techsupport@esibio.com](mailto:techsupport@esibio.com)