

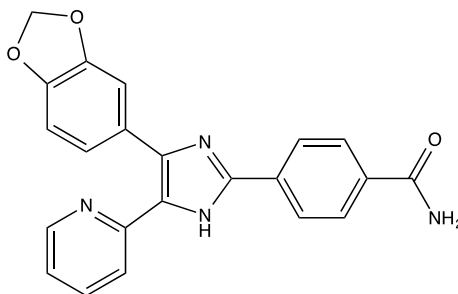
Catalog # 10-2443

SB-431542

CAS# 301836-41-9

4-[4-(1,3-Benzodioxol-5-yl)-5-(2-pyridinyl)-1H-imidazol-2-yl]benzamide

Lot # FBS2043



Potent and selective ALK4, ALK5 and ALK7 inhibitor (TGF β superfamily Type I activin receptor-like kinase). (ALK5 IC₅₀ = 94 nM).^{1,2} Inhibits TGF β -induced proliferation of human osteosarcoma cells.³ Enhances growth and integrity of embryonic stem cell-derived endothelial cells.⁴ A frequently used agent employed in numerous stem cell differentiation protocols.⁵ Cell permeable.

- 1) Laping *et al.* (2002), *Inhibition of transforming growth factor (TGF-beta1-induced extracellular matrix with a novel inhibitor of the TGF-beta type I kinase activity: SB-431542*; Mol. Pharmacol., **62** 58
- 2) Inman *et al.* (2002), *SB-431542 is a potent and specific inhibitor of transforming growth factor-beta superfamily type I activin receptor-like kinase (ALK) receptors ALK4, ALK5 and ALK7*; Mol. Pharmacol., **62** 65
- 3) Matsuyama *et al.* (2003), *SB-431542 and Gleevec inhibit transforming growth factor-beta-induced proliferation of human osteosarcoma cells*; Cancer Res., **63** 7791
- 4) Watabe *et al.* (2003), *TGF-beta receptor kinase inhibitor enhances growth and integrity of embryonic stem cell-derived endothelial cells*; J. Cell Biol., **163** 1303
- 5) Stanslowsky *et al.* (2014), *Functional differentiation of midbrain neurons from human cord blood-derived induced pluripotent stem cells*; Stem Cell Res. Ther., **5** 35

PHYSICAL DATA

Molecular Weight:	384.40
Molecular Formula:	C ₂₂ H ₁₆ N ₄ O ₃
Purity:	99% by HPLC
	NMR: (Conforms)
Solubility:	DMSO (up to 30 mg/ml) or Ethanol (up to 3 mg/ml)
Physical Description:	Yellow solid
Storage and Stability:	Store as supplied desiccated at room temperature for up to 2 years from the date of purchase. Solutions in DMSO or ethanol may be stored at -20°C for up to 3 months.

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