

Product Datasheet

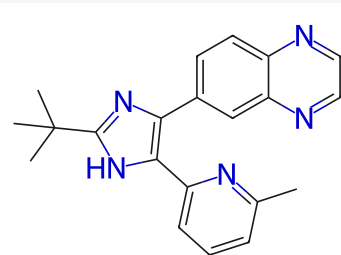
SB525334

Catalog No. **BP-02068** · CAS **356559-20-1** · Form **free base** · Physical state **solid** · Color **Light yellow to yellow** · Version **1.0** · Revision **2026-09-14**

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Molecular formula	C₂₁H₂₁N₅
Molecular weight	343.4249

STRUCTURE



DESCRIPTION

SB 525334 is a potent and selective transforming growth factor β 1 receptor (ALK5) inhibitor with an IC₅₀ of 14.3 nM.

BIOLOGICAL ACTIVITY

In Vitro

SB525334 (1 μ M; for 15 minutes before stimulating with 0.625 ng/ml of TGF- β 1, assesses after 6 days) inhibits TGF- β 1-mediated proliferation of familial idiopathic pulmonary arterial hypertension (iPAH) pulmonary artery smooth muscle cells (PASMCs) at an IC₅₀ of 295 nM.

In Vivo

SB525334 (3-30 mg/kg; p.o.; daily from days 17 to 35) significantly reverses pulmonary arterial pressure in a rat model of pulmonary arterial hypertension (PAH).

SOLUBILITY

Soluble in DMSO

REFERENCES

- [1]. Grygielko ET, et al. Inhibition of gene markers of fibrosis with a novel inhibitor of transforming growth factor-beta type I receptor kinase in puromycin-induced nephritis. J Pharmacol Exp Ther, 2005, 313(3), 943-951.
- [2]. Thomas M, et al. ALK5 mediates abnormal proliferation of vascular smooth muscle cells from patients with familial pulmonary arterial hypertension and is involved in the progression of experimental pulmonary arterial hypertension induced by monocrotaline.
- [3]. Laping NJ, et al. Tumor-specific efficacy of transforming growth factor-beta RI inhibition in Eker rats. Clin Cancer Res, 2007, 13(10), 3087-3899.

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