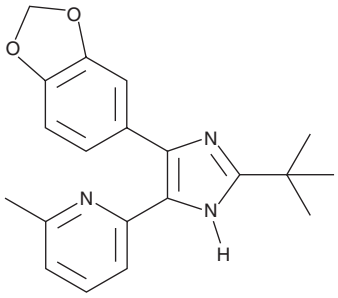
PRODUCT INFORMATION

SB-505124

Item No. 11793

CAS Registry No.:	694433-59-5
Formal Name:	2-[4-(1,3-benzodioxol-5-yl)-2-(1,1-dimethylethyl)-1H-imidazol-5-yl]-6-methyl-pyridine
MF:	$C_{20}H_{21}N_3O_2$
FW:	335.4
Purity:	≥98%
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

SB-505124 is supplied as a crystalline solid. A stock solution may be made by dissolving the SB-505124 in the solvent of choice, which should be purged with an inert gas. SB-505124 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of SB-505124 in ethanol and DMF is approximately 20 mg/ml and approximately 17 mg/ml in DMSO.

SB-505124 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, SB-505124 should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. SB-505124 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

SB-505124 inhibits the TGF-β1 receptor serine/threonine kinase ALK5 with an IC_{50} value of 47 nM.[1] Though it is a less potent antagonist of ALK4 (IC_{50} = 129 nM) and ALK7, SB-505124 selectively and concentration-dependently inhibits ALK4-, ALK5-, and ALK7-dependent activation of downstream SMAD2 and SMAD3 and TGF-β–induced MAP kinase pathway components without altering ALK1-3 or ALK6-induced SMAD signaling.[1] In an assay determining *in vitro* phosphorylation of SMAD3, SB-505124 is more potent than SB-431542 (Item No. 13031) with IC_{50} values of 47 *versus* 94 nM, respectively.[1]

Reference

1. DaCosta Byfield, S., Major, C., Laping, N.J., *et al.* SB-505124 is a selective inhibitor of transforming growth factor-β type I receptors ALK4, ALK5, and ALK7. *Mol. Pharmacol.* **65(3)**, 744-752 (2004).

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