

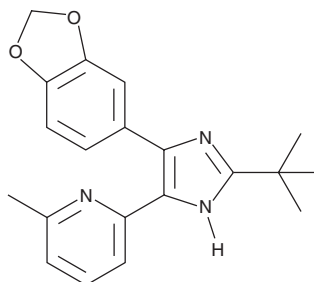
# PRODUCT INFORMATION



**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<sub>20</sub>H<sub>21</sub>N<sub>3</sub>O<sub>2</sub>  
**FW:** 335.4  
**Purity:** ≥98%  
**Stability:** ≥2 years at -20°C  
**Supplied as:** A crystalline solid  
**UV/Vis.:** λ<sub>max</sub>: 243, 314 nm



## Laboratory Procedures

For long term storage, we suggest that SB-505124 be stored as supplied at -20°C. It should be stable for at least two years.

SB-505124 is supplied as a crystalline solid. A stock solution may be made by dissolving the SB-505124 in the solvent of choice. SB-505124 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. 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<sub>50</sub> value of 47 nM.<sup>1</sup> Though it is a less potent antagonist of ALK4 (IC<sub>50</sub> = 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.<sup>1</sup> In an assay determining *in vitro* phosphorylation of SMAD3, SB-505124 is more potent than SB-431542 (Item No. 13031) with IC<sub>50</sub> values of 47 versus 94 nM, respectively.<sup>1</sup>

## Reference

1. DaCosta, 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**, 744-752 (2004).

### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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