

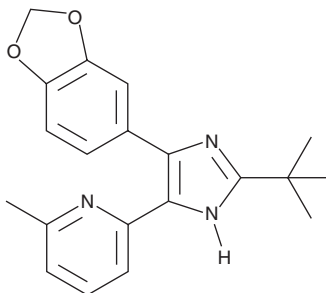
# PRODUCT INFORMATION



**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%  
**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<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 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).

### 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.

### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 11/22/2022

## CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM