

**Product Name:** SB 505124

**Catalog No.:** 3263

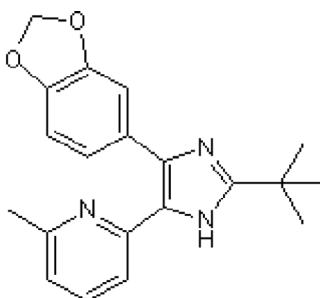
**Batch No.:** 3

CAS Number: 694433-59-5

IUPAC Name: 2-[4-(1,3-Benzodioxol-5-yl)-2-(1,1-dimethylethyl)-1H-imidazol-5-yl]-6-methyl-pyridine

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>20</sub>H<sub>21</sub>N<sub>3</sub>O<sub>2</sub>.  
**Batch Molecular Weight:** 335.4  
**Physical Appearance:** White solid  
**Solubility:** DMSO to 100 mM  
 2eq. HCl to 100 mM  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**HPLC:** Shows 100.0% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure

**Microanalysis:**

	Carbon	Hydrogen	Nitrogen
Theoretical	71.62	6.31	12.53
Found	71.52	6.5	12.55

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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**Description:**

SB 505124 is a selective inhibitor of transforming growth factor- $\beta$  type I receptor (ALK5), ALK4 and ALK7 ( $IC_{50}$  values are 47 and 129 nM for ALK5 and ALK4 respectively). Selectively inhibits signaling from TGF- $\beta$  and activin; does not inhibit other ALK family members. Promotes adenine base editor activity in vivo and in vitro at 10  $\mu$ M.

**Physical and Chemical Properties:**

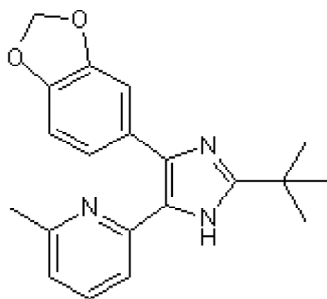
Batch Molecular Formula: C<sub>20</sub>H<sub>21</sub>N<sub>3</sub>O<sub>2</sub>.

Batch Molecular Weight: 335.4

Physical Appearance: White solid

**Minimum Purity:**  $\geq$ 98%

**Batch Molecular Structure:**



**Storage:** Store at -20°C

**Solubility & Usage Info:**

DMSO to 100 mM

2eq. HCl to 100 mM

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. \*Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

**SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

**SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

**References:**

**Yang et al (2022)** Small-molecule activators specific to adenine base editors through blocking the canonical TGF- $\beta$  pathway. *Nucleic Acids Res.* **50** 9632. PMID: 36043443.

**Noma et al (2008)** The essential role of fibroblasts in esophageal squamous cell carcinoma-induced angiogenesis. *Gastroenterology* **134** 1981. PMID: 18439605.

**Hu et al (2005)** Reactive oxygen species production via NADPH oxidase mediates TGF- $\beta$ -induced cytoskeletal alterations in endothelial cells. *Am.J.Physiol.Renal Physiol.* **289** F816. PMID: 16159901.

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