

**SW033291, 15-PGDH inhibitor**

Catalog	Unit
TBI4888-5MG	5 mg
TBI4888-25MG	25 mg

**Product Details**

**Formal Name:** 4-Butylsulfinyl-4-phenyl-6-thiophen-2-ylthieno[2,3-b]pyridin-3-amine

**Molecular Formula:** C<sub>21</sub>H<sub>20</sub>N<sub>2</sub>OS<sub>3</sub>

**Formula Weight:** 412.6

**CAS Number:** 459147-39-8

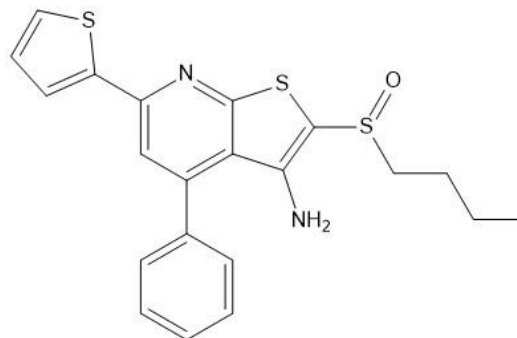
**Purity:** >98%

**Formulation:** Powder

**Solubility:** Soluble in DMSO (up to 25 mg/ml)

**Storage:** -20°C

**Stability:** ≥ 2 years

**Applications**

15-PGDH inhibitor

**Functions**

Inhibitor of 15-hydroxyprostaglandin dehydrogenase (IC<sub>50</sub> = 1.5 nM) that increases prostaglandin E2 levels in bone marrow and other tissues by inhibiting in vivo degradation of PGE2. It accelerated neutrophil recovery, regeneration of platelets and red blood cells, and expanded the numbers of more primitive bone marrow SKL cells in bone marrow transplants. Also stimulated colon epithelial regeneration in a mouse model of ulcerative colitis. It increased bone formation in mice via PGE<sub>2</sub> activation of EP4. Enhanced myogenic differentiation and myotube formation in repairing muscle defects in mice. It reduced the severity of pulmonary fibrotic lesions and extracellular matrix remodeling and improved pulmonary function in bleomycin-treated mice. It also prevented hepatic ischemia-reperfusion injury in mice. Mitigates oxidative damage, suppresses neuroinflammation, and restores blood-brain barrier integrity in mouse models of Alzheimer's disease and traumatic brain injury. In addition to halting neurodegeneration, it also preserved cognitive function at levels indistinguishable from healthy controls.

**Application Procedures**

First dissolved in DMSO (up to 25 mg/ml), then diluted to aqueous buffer. Solutions in DMSO may be stored at -20°C for up to 2 months.

**For research use only.**