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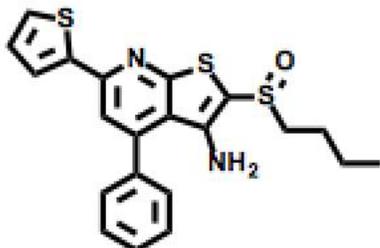
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15-PGDH Inhibitor – SW033291

Chemical Name: 2-(butylsulfinyl)-4-phenyl-6-(thiophen-2-yl)thieno[2,3-b]pyridin-3-amine



Molecular Weight:	412.59
Formula:	C ₂₁ H ₂₀ N ₂ OS ₃
Purity:	≥98%
CAS#:	459147-39-8
Solubility:	DMSO up to 50 mM
Storage	Powder: 4 °C 1 year DMSO: 4 °C 3 months -20 °C 1 year

Biological Activity:

SW033291 is a highly potent and selective inhibitor of 15-PGDH enzyme with IC₅₀ 1.5 nM, can increase prostaglandin PGE₂ levels in bone marrow and other tissues. It inhibits 15-PGDH with noncompetitive pattern. Treatment of A549 cells with SW033291 increased PGE₂ levels by 3.5-fold at 500 nM, with EC₅₀ value of ~75 nM. SW033291 accelerates hematopoietic recovery in mice receiving a bone marrow transplant. It also promotes tissue regeneration in mouse models of colon and liver injury. Tissues from 15-PGDH knockout mice demonstrate similar increased regenerative capacity. SW033291 is a good compound to validate 15-PGDH inhibition could be a new therapeutic strategy for tissue regeneration in diverse clinical contexts.

How to Use:

In vitro: SW033291 was used at 1 μM in vitro and cellular assays.

In vivo: SW033291 was dosed to mice by intraperitoneal injection at 5-10 mg/Kg once or twice per day.

Reference:

1. Zhang Y, et al. Inhibition of the prostaglandin-degrading enzyme 15-PGDH potentiates tissue regeneration. (2015) Science. 348(6240):aaa2340.

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