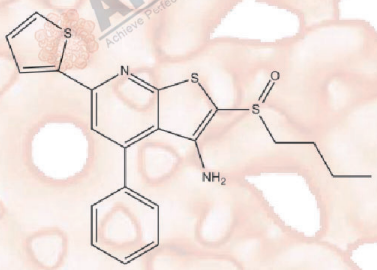
# Product Data Sheet

## SW033291



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|---|---|
| **Cat. No.:** | A8709 |
| **CAS No.:** | 459147-39-8 |
| **Formula:** | C21H20N2OS3 |
| **M.Wt:** | 412.59 |
| **Synonyms:** | |
| **Target:** | 15-PGDH |
| **Pathway:** | Protease |
| **Storage:** | Store at -20°C |

## Solvent & Solubility

In Vitro

insoluble in H2O; ⩾10.13 mg/mL in EtOH with ultrasonic; ⩾20.65 mg/mL in DMSO

Preparing Stock Solutions

| Mass / Solvent / Concentration | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 2.4237 mL | 12.1186 mL | 24.2371 mL |
| 5 mM | 0.4847 mL | 2.4237 mL | 4.8474 mL |
| 10 mM | 0.2424 mL | 1.2119 mL | 2.4237 mL |

Please refer to the solubility information to select the appropriate solvent.

## Biological Activity

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|---|---|
| Shortsummary | 15-PGDH enzyme inhibitor |
| $IC_{50}$ & Target | 1.5 nM (15-PGDH) |

In Vitro

**Cell Viability Assay**

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|---|---|
| Cell Line: | CD45- bone marrow cells |
| Preparation method: | The solubility of this compound in DMSO is > 20.7mg/mL. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below - 20 °C for several months. |
| Reacting conditions: | 0.5 μM; 2 hrs |

| | | |
|---|---|---|
| | Applications: | In CD45- bone marrow cells, SW033291 inhibited 15-PGDH, increased tissue levels of PGE2, and induced CXCL12 and SCF expression, which in turn accelerated homing of transplanted hematopoietic stem cells, generation of mature blood elements, as well as posttransplant recovery of normal blood counts. In addition, inhibiting 15-PGDH also stimulated cell proliferation after injury to colon or liver, and accelerated repair of these tissues. |
| In Vivo | **Animal experiment** | |
| | Animal models: | Mice receiving a bone marrow transplant and mouse models of colon and liver injury |
| | Dosage form: | 10 mg/kg; i.p.; b.i.d. |
| | Applications: | In mice receiving a bone marrow transplant, SW033291 promoted hematopoietic recovery. In mouse models of colon and liver injury, SW033291 lowered the levels of colitis-associated inflammatory cytokines, protected mice from colitis, as well as facilitated liver regeneration. |
| | Other notes: | Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal. |

## Product Citations

**See more customer validations on www.apexbt.com.**

## References

[1]. Zhang Y, Desai A, Yang SY et al. Inhibition of the prostaglandin-degrading enzyme 15-PGDH potentiates tissue regeneration. Science. 2015 Jun 12;348(6240). pii: aaa2340.

## Caution

**FOR RESEARCH PURPOSES ONLY.**

**NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

*Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.*

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