# Product Datasheet

## Mesalamine (orb1223727)

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|---|---|
| **Catalog Number** | orb1223727 |
| **Category** | Small Molecules |

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**Description**

5-aminosalicylic acid (5-ASA), also known as mesalamine or Mesalazine is an anti-inflammatory drug used to treat inflammatory bowel disease, such as ulcerative colitis and mild-to-moderate Crohn's disease.(In Vitro):5-Aminosalicylic acid (5-ASA) is a specific agonist for PPARγ, and only PPARγ but not PPARα or PPARδ induces p65 degradation. 5-Aminosalicylic acid induces degradation of p65 protein indicative of PPARγ's E3 ubiquitin ligase activity. 5-Aminosalicylic acid also inhibits PAK1 at the mRNA level which is suggestive of an additional mechanism independent of PPARγ ligand activation. 5-Aminosalicylic acid blocks NF-κB in intestinal epithelial cells (IECs) through inhibition of PAK1. Pretreatment with 5-Aminosalicylic acid (5-ASA) or Nimesulide at different concentration (10-1000 μmol/L) for 12-96 h, inhibits the growth of HT-29 colon carcinoma cells in a dose and time-dependent manner. However, the suppression of 5-Aminosalicylic acid or Nimesulide has no statistical significance. The growth of HT-29 colon carcinoma cells is inhibited dose-dependently when pretreated with different doses of combined 5-Aminosalicylic acid and Nimesulide. Combined 5-Aminosalicylic acid (final concentration 100 μM) and Nimesulide (final concentration 10-1000 μM) inhibits the proliferation of HT-29 colon carcinoma cells in a dose-dependent manner, being more potent than corresponding dose of Nimesulide. Similarly, combined Nimesulide (final concentration 100 μM) and 5-Aminosalicylic acid (final concentration 10-1000 μM) also inhibits the proliferation of these cells dose-dependently, being more potent than corresponding dose of 5-Aminosalicylic acid.\n(In Vivo):5-Aminosalicylic acid (5-ASA) has an antineoplastic effect in a xenograft tumor model. To evaluate the in vivo antineoplasic effect of 5-Aminosalicylic acid, SCID mice engrafted with HT-29 colon cancer cells are treated daily for 21 consecutive days with 5-Aminosalicylic acid at 50 mM. At the end of the treatment, a reduction of 80-86% of tumor weight and volume is observed in SCID mice receiving 5-Aminosalicylic acid compared with control mice or mice treated with GW9662 alone. The antineoplastic effect of 5-Aminosalicylic acid is already detectable after 10 days of 5-Aminosalicylic acid treatment. Similar results are obtained with mice treated with 5-Aminosalicylic acid at 5 mM. Antitumorigenic effect of 5-Aminosalicylic acid is completely abolished at 21 days by simultaneous intraperitoneal administration of GW9662. Thus, the observed antineoplastic effect of 5-Aminosalicylic acid is at least partially dependent on PPARγ.

**Target**

COX

**Purity**

>98% (HPLC)

**MW**

153.14

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| **Target Areas** | COX\| ALOX5\| MPO\| NF-κB\| PPARγ |
| **Solubility (25°C)** | Ethanol: 31 mg/mL (202.42 mM); DMSO: 31 mg/mL (202.42 mM) |
| **CAS Number** | 89-57-6 |
| **Formula** | $C_7H_7NO_3$ |
| **SMILES** | O=C(O)C1=CC(N)=CC=C1O |
| **Chemical Name** | 5-amino-2-hydroxybenzoic acid |
| **Storage** | Storage temperature: -20°C. Stability: ≥ 2 years |
| **Note** | For research use only |
| **Expiration Date** | 12 months from date of receipt. |

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