

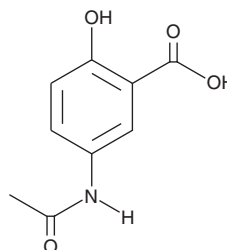
# PRODUCT INFORMATION



## N-acetyl-5-Aminosalicylic Acid

Item No. 27618

**CAS Registry No.:** 51-59-2  
**Formal Name:** 5-(acetylamino)-2-hydroxy-benzoic acid  
**Synonyms:** Acetylmisalazine, N-acetyl-ASA, N-acetyl Mesalamine, NSC 54183, Salicytamide  
**MF:** C<sub>9</sub>H<sub>9</sub>NO<sub>4</sub>  
**FW:** 195.2  
**Purity:** ≥98%  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

N-acetyl-5-Aminosalicylic acid is supplied as a solid. A stock solution may be made by dissolving the N-acetyl-5-aminosalicylic acid in the solvent of choice, which should be purged with an inert gas. N-acetyl-5-Aminosalicylic acid is slightly soluble in methanol and DMSO.

### Description

N-acetyl-5-Aminosalicylic acid is a metabolite of the anti-inflammatory agent 5-aminosalicylic acid (5-ASA; Item No. 70265) and its prodrug form, sulfasalazine (Item No. 15025).<sup>1,2</sup> It is formed in the liver, intestinal lumen, and colonic epithelial cells via N-acetyltransferases.<sup>3</sup> It reduces IFN-γ binding to colonic epithelial cells by 24% when used at a concentration of 10 mM.<sup>4</sup> N-acetyl-5-Aminosalicylic acid (100 μM) scavenges 2,2-diphenyl-1-picrylhydrazyl (DPPH; Item No. 14805) radicals in a cell-free assay and inhibits base hydroxylation in DNA stimulated by hydroxy radicals.<sup>1,5</sup> Unlike sulfasalazine, N-acetyl-5-aminosalicylic acid does not inhibit 15-hydroxy prostaglandin dehydrogenase (PGDH).<sup>2</sup> Urinary levels of N-acetyl-5-aminosalicylic acid have been used as a marker of 5-ASA adherence in patients with inflammatory bowel disease.<sup>6</sup>

### References

1. Allgayer, H., Kolb, M., Stuber, V., *et al.* Modulation of base hydroxylation by bile acids and salicylates in a model of human colonic mucosal DNA: Putative implications in colonic cancer. *Dig. Dis. Sci.* **44(4)**, 761-767 (1999).
2. Berry, C.N., Houlst, J.R., Peers, S.H., *et al.* Inhibition of prostaglandin 15-hydroxydehydrogenase by sulphasalazine and a novel series of potent analogues. *Biochem. Pharmacol.* **32(19)**, 2863-2871 (1983).
3. Small, R.E. and Schraa, C.C. Chemistry, pharmacology, pharmacokinetics, and clinical applications of mesalamine for the treatment of inflammatory bowel disease. *Pharmacotherapy* **14(4)**, 385-398 (1994).
4. Crotty, B., Rosenberg, W.M., Aronson, J.K., *et al.* Inhibition of binding of interferon-γ to its receptor by salicylates used in inflammatory bowel disease. *Gut* **33(10)**, 1353-1357 (1992).
5. Borges, R.S., Pereira, G.A., Vale, J.K., *et al.* Design and evaluation of 4-aminophenol and salicylate derivatives as free-radical scavenger. *Chem. Biol. Drug Des.* **81(3)**, 414-419 (2013).
6. Červený, P., Bortlík, M., Kuběna, A., *et al.* Nonadherence in inflammatory bowel disease: Results of factor analysis. *Inflamm. Bowel Dis.* **13(10)**, 1244-1249 (2007).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897

[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM