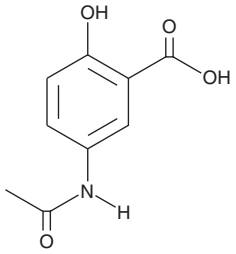
PRODUCT INFORMATION

N-acetyl-5-Aminosalicylic Acid

Item No. 27618

CAS Registry No.: 51-59-2
Formal Name: 5-(acetylamino)-2-hydroxy-benzoic acid
Synonyms: Acetylmesalazine, N-acetyl-ASA, N-acetyl Mesalamine, NSC 54183, Salicytamide
MF: $C_9H_9NO_4$
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).[1,2] It is formed in the liver, intestinal lumen, and colonic epithelial cells *via* N-acetyltransferases.[3] It reduces IFN-γ binding to colonic epithelial cells by 24% when used at a concentration of 10 mM.[4] 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.[1,5] Unlike sulfasalazine, N-acetyl-5-aminosalicylic acid does not inhibit 15-hydroxy prostaglandin dehydrogenase (PGDH).[2] Urinary levels of N-acetyl-5-aminosalicylic acid have been used as a marker of 5-ASA adherence in patients with inflammatory bowel disease.[6]

References

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2. Berry, C.N., Hoult, 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).

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