

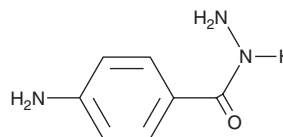
PRODUCT INFORMATION



4-Aminobenzoic Acid hydrazide

Item No. 14845

CAS Registry No.: 5351-17-7
Formal Name: 4-amino-benzoic acid, hydrazide
Synonyms: 4-ABAH, Myeloperoxidase Inhibitor 1, NSC 640
MF: C₇H₉N₃O
FW: 151.2
Purity: ≥98%
UV/Vis.: λ_{max}: 282 nm
Supplied as: A crystalline 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

4-Aminobenzoic acid hydrazide (4-ABAH) is supplied as a crystalline solid. A stock solution may be made by dissolving the 4-ABAH in the solvent of choice. 4-ABAH is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of 4-ABAH in these solvents is approximately 14 and 10 mg/ml, respectively.

4-ABAH is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 4-ABAH should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. 4-ABAH has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

4-Aminobenzoic acid hydrazide (4-ABAH) is an irreversible inhibitor of myeloperoxidase (MPO; IC₅₀ = 0.3 μM).¹ It reduces the production of hypochlorous acid (HOCl) induced by opsonized zymosan or phorbol 12-myristate 13-acetate (PMA; Item No. 10008014) in isolated human neutrophils with IC₅₀ values of 16 and 2.2 μM, respectively. 4-ABAH inhibits PMA-induced formation of neutrophil extracellular traps (NETs) in the same cells.² It reduces infarct volume and the severity of neurological deficits, as well as increases survival, in a mouse model of cerebral ischemia induced by transient middle cerebral artery occlusion (MCAO) when administered at a dose of 40 mg/kg twice per day.³

References

1. Kettle, A.J., Gedye, C.A., Hampton, M.B., *et al.* Inhibition of myeloperoxidase by benzoic acid hydrazides. *Biochem. J.* **308**, 559-563 (1995).
2. Nakabo, S., Ohmura, K., Akizuki, S., *et al.* Activated neutrophil carbamylates albumin via the release of myeloperoxidase and reactive oxygen species regardless of NETosis. *Mod. Rheumatol.* **30(2)**, 345-349 (2019).
3. Forghani, R., Kim, H.J., Wojtkiewicz, G.R., *et al.* Myeloperoxidase propagates damage and is a potential therapeutic target for subacute stroke. *J. Cereb. Blood Flow Metab.* **35(3)**, 485-493 (2015).

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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