

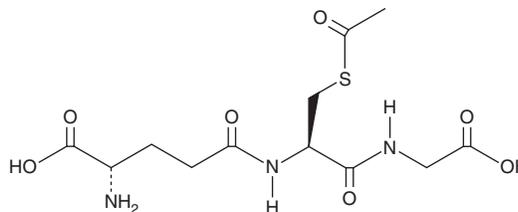
PRODUCT INFORMATION



S-Acetyl-L-glutathione

Item No. 29624

CAS Registry No.: 3054-47-5
Formal Name: L-γ-glutamyl-S-acetyl-L-cysteinyl-glycine
Synonym: S-Acetylglutathione
MF: C₁₂H₁₉N₃O₇S
FW: 349.4
Purity: ≥98%
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

S-Acetyl-L-glutathione is supplied as a crystalline solid. Aqueous solutions of S-acetyl-L-glutathione can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of S-acetyl-L-glutathione in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

S-Acetyl-L-glutathione is a derivative of glutathione (GSH; Item No. 10007461).¹ It is more stable in plasma than GSH and, unlike GSH, can be taken up into cells, where it is converted to GSH by intracellular thioesterases.¹⁻³ S-Acetyl-L-glutathione (50 μM) increases intracellular GSH levels in primary fibroblasts derived from patients with glutathione synthetase deficiency.¹ It induces apoptosis in Daudi, Raji, and Jurkat lymphoma cells when used at a concentration of 5 mM.⁴ It inhibits the replication of herpes simplex virus 1 (HSV-1) in human foreskin fibroblasts when used at concentrations of 5 and 10 mM.² S-Acetyl-L-glutathione (6.25 μg/g per day), but not GSH, increases survival in a mouse model of HSV-1 infection.

References

1. Okun, J.G., Sauer, S., Bähr, S., *et al.* S-Acetylglutathione normalizes intracellular glutathione content in cultured fibroblasts from patients with glutathione synthetase deficiency. *J. Inherit. Metab. Dis.* **27(6)**, 783-786 (2004).
2. Vogel, J.-U., Cinatl, J., Dauletbaev, N., *et al.* Effects of S-acetylglutathione in cell and animal model of herpes simplex virus type 1 infection. *Med. Microbiol. Immunol.* **194(1-2)**, 55-59 (2005).
3. Galzigna, L., Rizzoli, V., Schiappelli, P., *et al.* S-acetyl- and S-phenylacetyl-glutathione as glutathione precursors in rat plasma and tissue preparations. *Enzyme Protein* **48(2)**, 98-104 (1994).
4. Locigno, R., Pincemail, J., Henno, A., *et al.* S-acetyl-glutathione selectively induces apoptosis in human lymphoma cells through a GSH-independent mechanism. *Int. J. Oncol.* **20(1)**, 69-75 (2002).

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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