

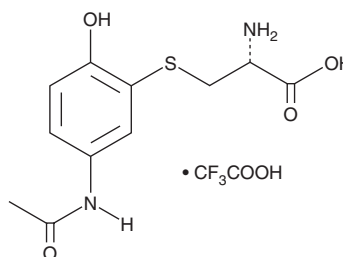
PRODUCT INFORMATION



3-Cysteinylacetaminophen (trifluoroacetate salt)

Item No. 26388

CAS Registry No.: 1331891-93-0
Formal Name: S-[5-(acetylamino)-2-hydroxyphenyl]-L-cysteine, trifluoroacetate salt
Synonyms: 3-(cysteine-S-yl)acetaminophen, APAP-Cys
MF: C₁₁H₁₄N₂O₄S • CF₃COOH
FW: 384.3
Purity: ≥98%
UV/Vis.: λ_{max}: 214, 248, 302 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

3-Cysteinylacetaminophen (trifluoroacetate salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the 3-cysteinylacetaminophen (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. 3-Cysteinylacetaminophen (trifluoroacetate salt) is soluble in the organic solvent DMSO at a concentration of approximately 0.17 mg/ml.

Description

3-Cysteinylacetaminophen is an acetaminophen-protein adduct formed during the metabolism of acetaminophen (Item No. 10024).^{1,2} 3-Cysteinylacetaminophen has been found in isolated human serum following therapeutic and supratherapeutic doses of acetaminophen and in the presence and absence of hepatotoxicity.^{3,4} In mice, 3-cysteinylacetaminophen decreases renal glutathione (GSH) levels, an effect that can be blocked by the γ-glutamyl inhibitor acivicin (Item No. 14003).

References

1. Yoon, E., Babar, A., Choudhary, M., *et al.* Acetaminophen-induced hepatotoxicity: A comprehensive update. *J. Clin. Transl. Hepatol.* **4(2)**, 131-142 (2016).
2. Stern, S.T., Bruno, M.K., Horton, R.A., *et al.* Contribution of acetaminophen-cysteine to acetaminophen nephrotoxicity II. Possible involvement of the γ-glutamyl cycle. *Toxicol. Appl. Pharmacol.* **202(2)**, 160-171 (2005).
3. Heard, K., Green, J.L., Anderson, V., *et al.* Paracetamol (acetaminophen) protein adduct concentrations during therapeutic dosing. *Br. J. Clin. Pharmacol.* **81(3)**, 562-568 (2016).
4. O'Malley, G.F., Mizrahi, F., Giraldo, P., *et al.* Protein-derived acetaminophen-cysteine can be detected after repeated supratherapeutic ingestion of acetaminophen in the absence of hepatotoxicity. *J. Med. Toxicol.* **11(3)**, 317-320 (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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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