

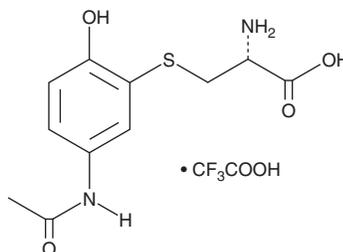
# PRODUCT INFORMATION



## 3-Cysteinyacetaminophen (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:** C<sub>11</sub>H<sub>14</sub>N<sub>2</sub>O<sub>4</sub>S • CF<sub>3</sub>COOH  
**FW:** 384.3  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 214, 248, 302 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥2 years



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

### Laboratory Procedures

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

### Description

3-Cysteinyacetaminophen is an acetaminophen-protein adduct formed during the metabolism of acetaminophen (Item No. 10024).<sup>1,2</sup> 3-Cysteinyacetaminophen has been found in isolated human serum following therapeutic and supratherapeutic doses of acetaminophen and in the presence and absence of hepatotoxicity.<sup>3,4</sup> In mice, 3-cysteinyacetaminophen decreases renal glutathione (GSH) levels, an effect that can be blocked by the  $\gamma$ -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  $\gamma$ -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.

#### WARRANTY AND LIMITATION OF REMEDY

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