

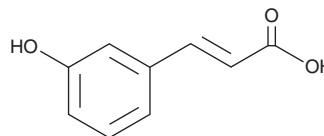
# PRODUCT INFORMATION



## *m*-Coumaric Acid

Item No. 37236

CAS Registry No.: 588-30-7  
Formal Name: 3-(3-hydroxyphenyl)-2-propenoic acid  
Synonyms: 3-hydroxy Cinnamic Acid, *m*-hydroxy Cinnamic Acid, *meta*-hydroxy Cinnamic Acid, 3-Coumaric Acid, *meta*-Coumaric Acid, NSC 28956, NSC 50308  
MF: C<sub>9</sub>H<sub>8</sub>O<sub>3</sub>  
FW: 164.2  
Purity: ≥98%  
UV/Vis.: λ<sub>max</sub>: 215, 234, 279 nm  
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

*m*-Coumaric acid is supplied as a solid. A stock solution may be made by dissolving the *m*-coumaric acid in the solvent of choice, which should be purged with an inert gas. *m*-Coumaric acid is soluble in methanol and DMSO.

### Description

*m*-Coumaric acid is an active metabolite of various polyphenols, including chlorogenic acid (Item No. 70930) and rosmarinic acid (Item No. 70900).<sup>1-5</sup> It inhibits cumene hydroperoxide-induced oxidation of DNA (IC<sub>50</sub> = 54.7 μM).<sup>3</sup> *m*-Coumaric acid (10 μM) induces neurite outgrowth of fetal rat hippocampal neurons.<sup>1</sup> It induces apoptosis and cell cycle arrest at the G<sub>0</sub>/G<sub>1</sub> phase in HeLa cervical cancer cells when used at concentrations of 5 and 10 mM, respectively.<sup>4</sup> *m*-Coumaric acid (3 mmol/kg) increases locomotor activity in mice.<sup>5</sup>

### References

1. Ito, H., Sun, X.-L., Watanabe, M., *et al.* Chlorogenic acid and its metabolite *m*-coumaric acid evoke neurite outgrowth in hippocampal neuronal cells. *Biosci. Biotechnol. Biochem.* **72**(3), 885-888 (2008).
2. Baba, S., Osakabe, N., Natsume, M., *et al.* Orally administered rosmarinic acid is present as the conjugated and/or methylated forms in plasma, and is degraded and metabolized to conjugated forms of caffeic acid, ferulic acid and *m*-coumaric acid. *Life. Sci.* **75**(2), 165-178 (2004).
3. Lodovici, M., Guglielmi, F., Meoni, M., *et al.* Effect of natural phenolic acids on DNA oxidation in vitro. *Food Chem. Toxicol.* **39**(12), 1205-1210 (2001).
4. Chuang, J.-Y., Tsai, Y.-Y., Chen, S.-C., *et al.* Induction of G<sub>0</sub>/G<sub>1</sub> arrest and apoptosis by 3-hydroxycinnamic acid in human cervix epithelial carcinoma (HeLa) cells. *In Vivo* **19**(4), 683-688 (2005).
5. Ohnishi, R., Ito, H., Iguchi, A., *et al.* Effects of chlorogenic acid and its metabolites on spontaneous locomotor activity in mice. *Biosci. Biotechnol. Biochem.* **70**(10), 2560-2563 (2006).

#### 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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