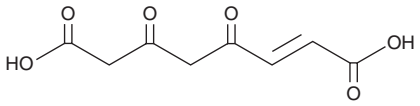
PRODUCT INFORMATION

Fumarylacetoacetic Acid

Item No. 46207

CAS Registry No.: 28613-33-4
Formal Name: 4,6-dioxo-2E-octenedioic acid
Synonym: 4-Fumarylacetoacetic Acid
MF: $C_8H_8O_6$
FW: 200.1
Purity: ≥95%
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

Fumarylacetoacetic acid is supplied as a solid. A stock solution may be made by dissolving the fumarylacetoacetic acid in the solvent of choice, which should be purged with an inert gas. Fumarylacetoacetic acid is slightly soluble (0.1-1 mg/ml) in acetonitrile.

Description

Fumarylacetoacetic acid is a metabolite of L-tyrosine (Item No. 36333) and L-phenylalanine (Item No. 31498).[1-3] It is enzymatically formed from L-tyrosine *via* 4-hydroxyphenylpyruvic acid (Item No. 38508), homogentisate (Item No. 20045), and 4-maleylacetoacetate intermediates. Fumarylacetoacetic acid inhibits DNA glycosylation, the initial step in base excision repair, in a cell-free assay.[2]

References

1. Ravdin, R.G. and Crandall, D.I. The enzymatic conversion of homogentisic acid to 4-fumarylacetoacetic acid. *J. Biol. Chem.* **189(1)**, 137-149 (1951).
2. Bliksrud, Y.T., Ellingsen, A., and Bjørås, M. Fumarylacetoacetate inhibits the initial step of the base excision repair pathway: Implication for the pathogenesis of tyrosinemia type I. *J. Inherit. Metab. Dis.* **36(5)**, 773-778 (2013).
3. Grasso, D., Balloni, V., Baratto, M.C., *et al.* Ochronotic deposition in alkaptonuria: Semiquinone-mediated oxidative coupling and metabolic drivers of homogentisic acid accumulation. *Int. J. Mol. Sci.* **26(19)**, 9674 (2025).

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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