L-Cystine, from non-animal source
Cell culture tested, meets EP testing specifications

Product Number C7602
Store at Room Temperature

Product Description
Molecular Formula: C₆H₁₂N₂O₄S₂
Molecular Weight: 240.3
CAS Number: 56-89-3
Synonyms: [R-(R*, R*)]-3,3'-dithiobis[2-aminopropanoic acid], dicysteine, β, β'-dithiodialanine

This product is tested for endotoxin levels and suitability for cell culture experiments.

Cystine is a derived amino acid that is formed from the oxidative linkage of two cysteine residues to give a disulfide covalent bond. Cystines form in many proteins after incorporation of free cysteines into the primary structure to stabilize their folded conformation. Cystine is the form in which cysteine exists in blood and urine.

The two cystine-related clinical conditions are cystinuria, which involves the defective membrane transport of cystine, and cystinosis, the accumulation of cystine in lysosomes. A review of cystine transport into rat brain cells has been published. An investigation into cysteine and cystine levels in normal and malignant cells with a relationship to γ-cystathionase levels and tumor sensitivity to L-cysteine and cystine depletion has been reported.

Mass spectrometry (GC-MS) methods for the analysis of cystine from granulocytes of cystinosis patients and in the urine of homocystinuria patients have been published.

Precautions and Disclaimer
For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions
This product is soluble in 1 M HCl (100 mg/ml), with heat as needed. The solubility of cystine in water is 0.112 mg/ml at 25 °C; cystine is more soluble in aqueous solutions with pH < 2 or pH > 8.

References
1. The Merck Index, 12th ed., Entry# 2851.