L-(+)-Ergothioneine

Product Information

CAS Registry No.: 497-30-3
Formal Name: αS-carboxy-2,3-dihydro-N,N,N-trimethyl-2-thioxo-inner salt-1H-imidazole-4-ethanaminium
MF: C₉H₁₅N₃O₂S
FW: 229.3
Purity: ≥98%
Stability: ≥98%

Laboratory Procedures

For long term storage, we suggest that L-(+)-ergothioneine be stored as supplied at -20°C. It should be stable for at least two years.

L-(+)-Ergothioneine is supplied as a crystalline solid. L-(+)-Ergothioneine is sparingly soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide.

Aqueous solutions of L-(+)-ergothioneine can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of L-(+)-ergothioneine in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

L-(+)-Ergothioneine is a naturally-occurring amino acid derived from histidine via hercynine. Ergothioneine is a stable antioxidant that scavenges and detoxifies free radicals and oxidants, increases intracellular thiol levels, controls nuclear factor-κB activation, and inhibits inflammatory gene expression. In addition, it inhibits the peroxynitrite-dependent nitration of nitrotyrosine, blocks oxidative DNA damage and cell death, and prevents the formation of xanthine and hypoxanthine. Ergothioneine is transported by the organic cation/carnitine transporter 1, which has been linked with autoimmune diseases, including rheumatoid arthritis and Crohn's disease.

References


Related Products

For a list of related products please visit: www.caymanchem.com/catalog/14905

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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