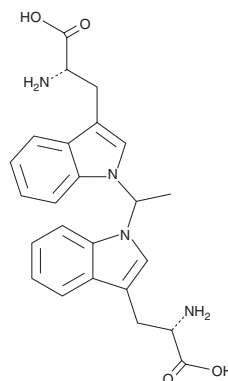


PRODUCT INFORMATION

1,1'-Ethylidene-bis-(L-tryptophan)

Item No. 35804

CAS Registry No.: 132685-02-0
Formal Name: 1,1'-ethylenebis-L-tryptophan
Synonyms: Peak 97 Contaminant,
 Peak E Contaminant,
 Peak E Substance
MF: $C_{24}H_{26}N_4O_4$
FW: 434.5
Purity: $\geq 95\%$
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

1,1'-Ethylidene-bis-(L-tryptophan) is supplied as a solid. A stock solution may be made by dissolving the 1,1'-ethylidene-bis-(L-tryptophan) in the solvent of choice, which should be purged with an inert gas. 1,1'-Ethylidene-bis-(L-tryptophan) is soluble in 1 M sodium hydroxide.

Description

1,1'-Ethylidene-bis-(L-tryptophan) is a potential impurity found in commercial preparations of L-tryptophan.¹ It increases the proliferation of EoL-3 eosinophilic leukemia cells, release of eosinophil cationic protein from isolated human peripheral blood eosinophils, and IL-5 production in isolated human T cells.² 1,1'-Ethylidene-bis-(L-tryptophan) (40 $\mu\text{g/kg}$) induces fascia thickening and increases mast cell infiltration, inflammation, and fibrosis in superficial adipose and panniculus carnosus tissues in mice as a model system of eosinophilia-myalgia syndrome.³

References

1. Trucksess, M.W. Separation and isolation of trace impurities in L-tryptophan by high-performance liquid chromatography. *J. Chromatogr.* **630(1-2)**, 147-150 (1993).
2. Yamaoka, K.A., Miyasaka, N., Inuo, G., et al. 1,1'-Ethylidenebis(tryptophan) (Peak E) induces functional activation of human eosinophils and interleukin 5 production from T lymphocytes: Association of eosinophilia-myalgia syndrome with a L-tryptophan contaminant. *J. Clin. Immunol.* **14(1)**, 50-60 (1994).
3. Love, L.A., Rader, J.L., Crofford, L.J., et al. Pathological and immunological effects of ingesting L-tryptophan and 1,1'-ethylidenebis (L-tryptophan) in Lewis rats. *J. Clin. Invest.* **91(3)**, 804-811 (1993).

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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