

DDC Protein, Mouse (sf9, His)

Cat. No.:	HY-P74204
Synonyms:	Aromatic-L-amino-acid decarboxylase; AADC; DOPA decarboxylase; DDC
Species:	Mouse
Source:	Sf9 insect cells
Accession:	088533 (M1-E480)
Gene ID:	13195
Molecular Weight:	Approximately 55 kDa

PROPERTIES

Biological Activity	Measured by its ability to convert the substrate 3, 4-dihydroxy L-phenylalanine (L-Dopa) to 3, 4-dihydroxyphenylethylamine (dopamine). The dopamine product is measured by its absorbance at 340 nm after derivatization with trinitrobenzene sulfonic acid. The specific activity is >1500 pmol/min/μg, as measured under the described conditions.
Appearance	Solution
Formulation	Supplied as 0.22 μm filtered solution in 20 mM Tris, 0.3 M NaCl, 10% Glycerol, pH 8.0.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconstitution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice

DESCRIPTION

Background	DDC, or aromatic L-amino acid decarboxylase, is an enzyme that catalyzes the decarboxylation of L-3,4-dihydroxyphenylalanine (DOPA) to produce dopamine and L-5-hydroxytryptophan to serotonin. This enzymatic activity is a critical step in the biosynthesis of neurotransmitters, specifically in the synthesis of dopamine, a neurotransmitter involved in various physiological processes including mood regulation and motor control, and serotonin, which is crucial for mood and emotion regulation. The decarboxylation reactions mediated by DDC are integral to the availability of these neurotransmitters, emphasizing the enzyme's significance in neurochemical pathways. It has to underscore DDC's specific role in the conversion of precursors to neurotransmitters, highlighting its importance in neurotransmitter biosynthesis.
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Caution: Product has not been fully validated for medical applications. For research use only.

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