

hDDC Protein, Human

Cat. No.:	HY-P701909
Synonyms:	DDC; Aromatic-L-amino-acid decarboxylase; AADC; DOPA decarboxylase; DDC
Species:	Human
Source:	E. coli
Accession:	P20711 (M1-E480)
Gene ID:	1644
Molecular Weight:	

PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22 µm filtered solution of 50 mM Tris-HCl, pH7.5, 200 mM NaCl, 20% glycerol.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	Please use rapid thawing with running water to thaw the protein.
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	Human aromatic L-amino acid decarboxylase (hDDC) is an enzyme that plays a crucial role in neurotransmitter biosynthesis by catalyzing the decarboxylation of L-3,4-dihydroxyphenylalanine (DOPA) to dopamine and L-5-hydroxytryptophan to serotonin. This enzymatic activity is a pivotal step in the synthesis of two key neurotransmitters, dopamine and serotonin, both of which are essential for the central nervous system's regulation of mood, behavior, and motor functions. The conversion of DOPA to dopamine by hDDC is particularly significant in the dopaminergic pathways, influencing motor control and emotional processes. The parallel conversion of L-5-hydroxytryptophan to serotonin underscores hDDC's role in serotonergic pathways, crucial for mood and emotional regulation. It has to emphasize hDDC's specific contributions to neurotransmitter synthesis, highlighting its importance in maintaining the delicate balance of signaling molecules critical for neurological functions.
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Caution: Product has not been fully validated for medical applications. For research use only.

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