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# Dopa Decarboxylase Human

Description: Dopa decarboxylase human recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 503 amino acids (1-480 a.a.) and having a molecular mass of 56.4 kDa. The Dopa decarboxylase is fused to 23 amino acid His Tag at N-terminus and purified by conventional chromatpgraphy.

Catalog #:ENPS-420

For research use only.

Synonyms:DDC, AADC, Aromatic-L-amino-acid decarboxylase, DOPA decarboxylase.

Source: Escherichia Coli.

Physical Appearance: Sterile filtered colorless solution.

Amino Acid Sequence:MGSSHHHHHH SSGLVPRGSH TRSMNASEFR RRGKEMVDYV ANYMEGIEGR QVYPDVEPGY LRPLIPAAAP QEPDTFEDII NDVEKIIMPG VTHWHSPYFF AYFPTASSYP AMLADMLCGA IGCIGFSWAA SPACTELETV MMDWLGKMLE LPKAFLNEKA GEGGGVIQGS ASEATLVALL AARTKVIHRL QAASPELTQA AIMEKLVAYS SDQAHSSVER AGLIGGVKLK AI

Purity: Greater than 95.0% as determined by SDS-PAGE.

### Formulation:

The Dopa decarboxylase protein solution contains 20mM Tris-HCl, pH-8, 2mM DTT and 10% glycerol.

# Stability:

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

# Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

## Introduction:

Dopa decarboxylase is a homodimeric, pyridoxal phosphate dependent enzyme. Dopa decarboxylase is involved in 2 metabolic pathways, synthesizing 2 significant neurotransmitters: dopamine and serotonin which both take part in numerous clinical disorders, including Parkinsons disease. Dopa decarboxylase is located in different areas of the brain and is mostly found in basal ganglia. Dopa decarboxylase catalyzes the decarboxylation of L-3,4-dihydroxyphenylalanine (DOPA) to dopamine, L-5-hydroxytryptophan to serotonin and L-tryptophan to tryptamine. Defects in Dopa decarboxylase leads to aromatic L-amino-acid decarboxylase deficiency (AADCD). AADCD deficiency is an inborn error in neurotransmitter metabolism that causes combined serotonin and catecholamine deficiency.

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