

CALB1 Human

Description: CALB1 Human Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 261 amino acids (1-261 a.a.) and having a molecular mass of 30kDa. The CALB1 is purified by proprietary chromatographic techniques.

Catalog #: PRPS-728

Synonyms: Calbindin, Vitamin D-dependent calcium-binding protein, avian-type, Calbindin D28, D-28K, CALB1, CAB27, CALB, calbindin 1 28kDa.

For research use only.

Source: Escherichia Coli.

Physical Appearance: Sterile Filtered colorless solution.

Amino Acid Sequence: MAESHLQSSL ITASQFFEIW LHFADGSGY LEGKELQNLI
QELQQARKKA GLELSPMKT FVDQYGQRDD GKIGIVELAH VLPTEENFLL LFRCQQLKSC
EEFMKTRWKY DTDHSGFIET EELKNFLKDL LEKANKTVDD TKLAEYTDLM LKLFDSNNDG
KLELTEMARL LPVQENFLLK FQGIKMGKE FNKAFELYDQ DGNGYIDENE LDALLKDLCE
KNKQDLINN IT

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

Formulation:

The CALB1 protein solution contains 20mM Tris-HCl buffer (pH8.0), 1mM DTT, 10% glycerol and 2mM EDTA.

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:

Calbindin 1 (CALB1) is a calcium binding protein that is a member of the troponin C superfamily. CALB1 plays a vital role in calcium regulation (including calcium transport and uptake, calcification of bone and teeth) and calcium associated signaling in neurons and transiently in embryological development. CALB1 also has a role in protecting neurons from apoptotic cell death. CALB1 buffers cytosolic calcium and may stimulate a membrane Ca²⁺-ATPase and a 3',5'-cyclic nucleotide phosphodiesterase. The biological function of CALB1 seems to be tied to the redox state of its five cysteine residues. CALB1 has 4 active calcium-binding domains, and 2 modified domains that seemingly have lost their calcium-binding ability. CALB1 is expressed in neural tissues. In the brain, the CALB1 synthesis is independent of vitamin-D-derived hormones. Disregulation of the CALB1 is associated with epilepsy, amyotrophic lateral sclerosis, Huntington's disease. The neurons in brains of Huntington disease patients are calbindin-depleted.

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