

ELAVL4 Protein, Human, Recombinant (His & Myc & SUMO)

General Information

Synonyms:	ELAVL4;PNEM;HUD;Hu-antigen D (HuD);Paraneoplastic encephalomyelitis antigen HuD; ELAV-like protein 4
Protein Construction:	1-380 aa
Species:	Human
Expression Host:	E. coli
Accession:	P26378
Molecular Weight:	61.8 kDa (predicted)
AA Sequence:	MVMIISTEMPQVSNQPTSNTSNGPSSNNRNCPSPMQTGATDDSKTNLIVNYLPQNMTQEEFRSLFGSIGEIE SCKLVRDKITGQSLGYGFVNYIDPKDAEKAINLNLRLQTKTIKVSYPSSASIRDANLYVSGLPKTMQKEL EQLFSQYGRITSRILVDQVTGVSRGVGFIRFDKRIEAEAAIKGLNGQKPSGATEPITVKFANNPSQKSSQALLS QLYQSPNRRYPGPLHHQAQRFRLLNLLNMAYGVKRLMSGVPVPPSACPPRFSPITIDGMTSLVGMNIPGHTGT GWCIFVYNLSPDSDESVLWQLFGPFGAVNNVKVIRDFNTNKCKGFGFVTMTNYDEAAMAIASLNGYRLGDR VLQVSFKTNKAHKS

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90% as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Tris-based buffer, 50% glycerol

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

RNA-binding protein that is involved in the post-transcriptional regulation of mRNAs. Plays a role in the regulation

of mRNA stability, alternative splicing and translation. Binds to AU-rich element (ARE) sequences in the 3' untranslated region (UTR) of target mRNAs, including GAP43, VEGF, FOS, CDKN1A and ACHE mRNA. Many of the target mRNAs are coding for RNA-binding proteins, transcription factors and proteins involved in RNA processing and/or neuronal development and function. By binding to the mRNA 3'UTR, decreases mRNA deadenylation and thereby contributes to the stabilization of mRNA molecules and their protection from decay. Also binds to the polyadenylated (poly(A)) tail in the 3'UTR of mRNA, thereby increasing its affinity for mRNA binding. Mainly plays a role in neuron-specific RNA processing by stabilization of mRNAs such as GAP43, ACHE and mRNAs of other neuronal proteins, thereby contributing to the differentiation of neural progenitor cells, nervous system development, learning and memory mechanisms. Involved in the negative regulation of the proliferative activity of neuronal stem cells and in the positive regulation of neuronal differentiation of neural progenitor cells. Promotes neuronal differentiation of neural stem/progenitor cells in the adult subventricular zone of the hippocampus by binding to and stabilizing SATB1 mRNA. Binds and stabilizes MSI1 mRNA in neural stem cells. Exhibits increased binding to ACHE mRNA during neuronal differentiation, thereby stabilizing ACHE mRNA and enhancing its expression. Protects CDKN1A mRNA from decay by binding to its 3'-UTR. May bind to APP and BACE1 mRNAs and the BACE1AS lncRNA and enhance their stabilization. Plays a role in neurite outgrowth and in the establishment and maturation of dendritic arbors, thereby contributing to neocortical and hippocampal circuitry function. Stabilizes GAP43 mRNA and protects it from decay during postembryonic development in the brain. By promoting the stabilization of GAP43 mRNA, plays a role in NGF-mediated neurite outgrowth. Binds to BDNF long 3'UTR mRNA, thereby leading to its stabilization and increased dendritic translation after activation of PKC. By increasing translation of BDNF after nerve injury, may contribute to nerve regeneration. Acts as a stabilizing factor by binding to the 3'UTR of NOVA1 mRNA, thereby increasing its translation and enhancing its functional activity in neuron-specific splicing. Stimulates translation of mRNA in a poly(A)- and cap-dependent manner, possibly by associating with the EIF4F cap-binding complex. May also negatively regulate translation by binding to the 5'UTR of Ins2 mRNA, thereby repressing its translation. Upon glucose stimulation, Ins2 mRNA is released from ELAVL4 and translational inhibition is abolished. Also plays a role in the regulation of alternative splicing. May regulate alternative splicing of CALCA pre-mRNA into Calcitonin and Calcitonin gene-related peptide 1 (CGRP) by competing with splicing regulator TIAR for binding to U-rich intronic sequences of CALCA pre-mRNA.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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