

TARDBP Protein, Human, Recombinant (His)

General Information

Synonyms: TAR DNA-binding protein 43;TDP-43;TDP43;TARDBP

Protein Construction: 1-396 aa

Species: Human

Expression Host: P. pastoris (Yeast)

Accession: Q13148

Molecular Weight: 44.9 kDa (predicted)

AA Sequence: MSEYIRVTEDEENDEPIEIPSEDDGTVLLSTVTAQFPGACGLRYRNPVSQCMRGVRLVEGILHAPDAGWGNLVY VVNYPKDNKRKMDDETDASSAVKVKRAVQKTSIDLIVLGLPWKTTEQDLKEYFSTFGVEVMVQVKKDLKTGHSK GFGFVRFTEYETQVKVMSQRHMIDGRWCDCKLPNSKQSQDEPLRSRKVFVGRCTEDMTEDELREFFSQYGD VMDVFIPKPFRAFAFVTFADDQIAQSLCGEDLIIGKISVHISNAEPKHNSNRQLERSGRFGGNPGGFGNQGGF GNSRGGGAGLGNNGGSNMGGGMNFGAFSINPAMMAAAQAALQSSWGMMLASQQNQSGPSGNNQ NQGNMQREPNQAFGSGNNSYSGSNSGAAIGWGSASNAGSGSG

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 various steps of RNA biogenesis and processing. Preferentially binds, via its two RNA recognition motifs RRM1 and RRM2, to GU-repeats on RNA molecules predominantly localized within

long introns and in the 3'UTR of mRNAs. In turn, regulates the splicing of many non-coding and protein-coding RNAs including proteins involved in neuronal survival, as well as mRNAs that encode proteins relevant for neurodegenerative diseases. Plays a role in maintaining mitochondrial homeostasis by regulating the processing of mitochondrial transcripts. Regulates also mRNA stability by recruiting CNOT7/CAF1 deadenylase on mRNA 3'UTR leading to poly(A) tail deadenylation and thus shortening. In response to oxidative insult, associates with stalled ribosomes localized to stress granules (SGs) and contributes to cell survival. Participates also in the normal skeletal muscle formation and regeneration, forming cytoplasmic myo-granules and binding mRNAs that encode sarcomeric proteins. Plays a role in the maintenance of the circadian clock periodicity via stabilization of the CRY1 and CRY2 proteins in a FBXL3-dependent manner. Negatively regulates the expression of CDK6. Regulates the expression of HDAC6, ATG7 and VCP in a PPIA/CYPA-dependent manner.

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