

Recombinant Rat HNRPD Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP52583

Size: 10ug, 100ug

Protein Name: Heterogeneous nuclear ribonucleoprotein D0 (hnRNP D0) (AU-rich element RNA-binding protein 1)

Synonym: Hnrnpd, Auf1, Hnrpd

UniProt ID: Q9JJ54

UniProt Link: www.uniprot.org/uniprotkb/Q9JJ54/entry

Species Source: Rat

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 353 AA

Molecular Weight: 38 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MSEEQFGGDGAAAAATAAVGGSAGEQEGAMVAAAQGAAAAAGSGSGGGSAPGGTEGGSTEAE
AKIDASKNEEDEGHSSPRHTEAATAQREEWKMFIGGLSWDTTKDLKDYFSKFGDVVDCTLKLD
PITGRSRGFGFVLFKESVSKVMDQKEHKLNGKVIDPKRAKAMKTKEPVKKIFVGGLSPDTPEEKIR
EYFGGFGEVESIELPMDNKTNRGFCFITFKEEEPVKKIMEKKYHNVGLSKCEIKVAMSKEQYQQQ
QQWGSRRGFAGRARGRGGGPSQNWNNQGYSNYWNQGYGSYGYNSQGYGGYGGYDYGYNSSY
GYGDYSNQQSGYGKVSRRGGHQNSYKPY

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Heterogeneous nuclear ribonucleoprotein D0 (hnRNP D0) (AU-rich element RNA-binding protein 1) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Binds with high affinity to RNA molecules that contain AU-rich elements (AREs) found within the 3'-UTR of many proto-oncogenes and cytokine mRNAs. Also binds to double- and single-stranded DNA sequences in a specific manner and functions as a transcription factor. Each of the RNA-binding domains specifically can bind solely to a single-stranded non-monotonous 5'-UUAG-3' sequence and also weaker to the single-stranded 5'-TTAGGG-3' telomeric DNA repeat. Binds RNA oligonucleotides with 5'-UUAGGG-3' repeats more tightly than the telomeric single-stranded DNA 5'-TTAGGG-3' repeats. Binding of RRM1 to DNA inhibits the formation of DNA quadruplex structure which may play a role in telomere elongation. May be involved in translationally coupled mRNA turnover. Implicated with other RNA-binding proteins in the cytoplasmic deadenylation/translational and decay interplay of the FOS mRNA mediated by the major coding-region determinant of instability (mCRD) domain. May play a role in the regulation of the rhythmic expression of circadian clock core genes. Directly binds to the 3'UTR of CRY1 mRNA and induces CRY1 rhythmic translation. May also be involved in the regulation of PER2 translation.

Subcellular Localization: Nucleus . Cytoplasm . Note=Localized in cytoplasmic mRNP granules containing untranslated mRNAs. Component of ribonucleosomes. Cytoplasmic localization oscillates diurnally.

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.