

Product datasheet for TP510713

Hnrnpu (NM_016805) Mouse Recombinant Protein

Product data:

Product Type: Recombinant Proteins

Description: Purified recombinant protein of Mouse heterogeneous nuclear ribonucleoprotein U (Hnrnpu), with C-terminal MYC/DDK tag, expressed in HEK293T cells, 20ug

Species: Mouse

Expression Host: HEK293T

Expression cDNA >MR210713 representing NM_016805

Clone or AA **Red**=Cloning site **Green**=Tags(s)

Sequence:

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MSSSPVNVKCLKVSELKEELKRRRLSDKGLKADLMDRLQAALDNEAGGRPAMEPGNGSLDLGGDAAGRSG
AGLEQEAAGAEDDEEEEGIAALDGDQMEELGEENGAAGAADAGAMEEEEEASEDENGDDQGFQEGEDELG
DEEEAGDENGHGEEQSQPPAAAAQQQPSQQRGAGKEAAGKSSGPTSLFAVTVAPPGARQQQQAGGDGK
TEQKGGDKKRGVCRPREDHGRGYFEYIEENKYSRAKSPQPPVEEEDHFDFTVCLDYNCDLHFKISRDL
RLSASSLTMESFAFLWAGGRASYGVSKGKVCFEMKVTEKIPVRHLYTKDIDIHEVRIGWSLTTSGMMLLGE
EEFSYGYSCLKGIKTCNCETEDYGEKFDENDVITCFANFETDEVELSYAKNGQDLGVAFKISKEVLADRPL
FPHVLCHNCAVEFNFGQKEKPYFPIPEDCTFIQNVPLEDRVRGPKGPEEKKDCEVMMIGLPGAGKTTWV
TKHAAENPGKYNILGTNTIMDKMMVAGFKKQMA DTGKLNLLQRAPQCLGKFIKIAARKKRNFIELDQTNV
SAAAQRRKMCLFAGFQRKAVVCPKDEDYKQRTQKKAIEVEGKDLPEHAVLKMKNFTLPEVAECFDEITY
VELQKEEAQKLEQYKEESKALPPEKKQNTGSKSNKNKSGKNQFNRRGGGHRGRGGFNMRGGNFRGGAP
GNRRGGYNRRGNMPQRGGGGGGGGIGYPYPRGPFVPRGGYSNRRGNYNRRGGMPNRRGNYNQNRGRGNRRGY
KNQSQGYNQWQQQFWGQKPWSQHYHQGY
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TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Tag: C-MYC/DDK

Predicted MW: 88.4 kDa

Concentration: >0.05 µg/µL as determined by microplate BCA method

Purity: > 80% as determined by SDS-PAGE and Coomassie blue staining

Buffer: 25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol

Note: For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.

Storage: Store at -80°C after receiving vials.



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Stability:	Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.
RefSeq:	<u>NP_058085</u>
Locus ID:	51810
UniProt ID:	<u>Q8VEK3</u>
RefSeq Size:	3670
Cytogenetics:	1 H4
RefSeq ORF:	2400
Synonyms:	AA408410; AI256620; AL024194; AL024437; AW557595; C86794; hnRNP U; Hnrpu; SAFA; Sp120

Summary:

DNA- and RNA-binding protein involved in several cellular processes such as nuclear chromatin organization, telomere-length regulation, transcription, mRNA alternative splicing and stability, Xist-mediated transcriptional silencing and mitotic cell progression (PubMed:20833368, PubMed:21235343, PubMed:22162999, PubMed:26244333). Plays a role in the regulation of interphase large-scale gene-rich chromatin organization through chromatin-associated RNAs (caRNAs) in a transcription-dependent manner, and thereby maintains genomic stability (By similarity). Required for the localization of the long non-coding Xist RNA on the inactive chromosome X (Xi) and the subsequent initiation and maintenance of X-linked transcriptional gene silencing during X-inactivation (PubMed:20833368, PubMed:26244333). Plays a role as a RNA polymerase II (Pol II) holoenzyme transcription regulator (PubMed:21235343, PubMed:22162999). Promotes transcription initiation by direct association with the core-TFIID basal transcription factor complex for the assembly of a functional pre-initiation complex with Pol II in a actin-dependent manner. Blocks Pol II transcription elongation activity by inhibiting the C-terminal domain (CTD) phosphorylation of Pol II and dissociates from Pol II pre-initiation complex prior to productive transcription elongation. Positively regulates CBX5-induced transcriptional gene silencing and retention of CBX5 in the nucleus. Negatively regulates glucocorticoid-mediated transcriptional activation (By similarity). Key regulator of transcription initiation and elongation in embryonic stem cells upon leukemia inhibitory factor (LIF) signaling (PubMed:21235343). Involved in the long non-coding RNA H19-mediated Pol II transcriptional repression (By similarity). Participates in the circadian regulation of the core clock component ARNTL/BMAL1 transcription (PubMed:18332112). Plays a role in the regulation of telomere length. Plays a role as a global pre-mRNA alternative splicing modulator by regulating U2 small nuclear ribonucleoprotein (snRNP) biogenesis. Plays a role in mRNA stability. Component of the CRD-mediated complex that promotes MYC mRNA stabilization. Enhances the expression of specific genes, such as tumor necrosis factor TNFA, by regulating mRNA stability, possibly through binding to the 3'-untranslated region (UTR). Plays a role in mitotic cell cycle regulation. Involved in the formation of stable mitotic spindle microtubules (MTs) attachment to kinetochore, spindle organization and chromosome congression. Phosphorylation at Ser-58 by PLK1 is required for chromosome alignment and segregation and progression through mitosis. Contributes also to the targeting of AURKA to mitotic spindle MTs. Binds to double- and single-stranded DNA and RNA, poly(A), poly(C) and poly(G) oligoribonucleotides. Binds to chromatin-associated RNAs (caRNAs). Associates with chromatin to scaffold/matrix attachment region (S/MAR) elements in a chromatin-associated RNAs (caRNAs)-dependent manner (By similarity). Binds (via RNA-binding RGG-box region) to the long non-coding Xist RNA; this binding is direct and bridges the Xist RNA and the inactive chromosome X (Xi) (PubMed:20833368, PubMed:26244333). Binds the long non-coding H19 RNA. Binds to SMN1/2 pre-mRNAs at G/U-rich regions. Binds to small nuclear RNAs (snRNAs). Binds to the 3' UTR of TNFA mRNA (By similarity). Also negatively regulates embryonic stem cell differentiation upon LIF signaling (PubMed:21235343). Required for embryonic development (PubMed:16022389). Binds to brown fat long non-coding RNA 1 (Blnc1); facilitates the recruitment of Blnc1 by ZBTB7B required to drive brown and beige fat development and thermogenesis (PubMed:28784777).[UniProtKB/Swiss-Prot Function]