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Product Information

Anti-hnRNP-U antibody, Mouse monoclonal
clone 3G6, purified from hybridoma cell culture

Catalog Number **R6278**

Product Description

Monoclonal Anti-hnRNP-U (mouse IgG1 isotype) is derived from the 3G6 hybridoma produced by the fusion of mouse myeloma cells (Sp2/0 cells) and splenocytes from mice BALB/c immunized with RNP's eluted from an oligo-dT cellulose column.[1] The isotype is determined by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Catalog Number ISO2).

Monoclonal Anti-hnRNP-U recognizes human[1,2] and monkey[1] hnRNP-U (~120 kDa). The antibody may be used in immunoblotting,[1,2] immunoprecipitation[1,2] and immunocytochemistry.[1,2]

RNA polymerase II transcripts in the nucleus are in complex with several proteins called heterogeneous nuclear ribonucleoproteins (hnRNPs). These proteins are important in biological activities such as transcription, pre-mRNA processing, cytoplasmic mRNA translation and turnover. hnRNPs can be isolated either by immunoprecipitation or by sucrose gradient fractionation of cell extracts. Isolated hnRNPs consist of protein groups named A to U and many of these protein groups consist of more than one isoform.[3,4]

hnRNP-U is the largest of the of the major hnRNP proteins and is an abundant nucleoplasmic phosphor-protein in eukaryotic cells. The protein binds pre-mRNA *in vivo* and both RNA and ss-DNA *in vitro*. The N-terminus of the protein is rich in acidic residues and the C-terminus is glycine rich. The protein contains a NTP binding site, a nuclear localization signal, and a glutamine-rich stretch.[5] The C-terminal part of the protein is important for RNA binding. hnRNP-U was shown to associate with nascent RNA polymerase II in the nucleoplasm and to form hnRNP complexes implicated in pre-mRNA processing. In the nuclei of cells infected with Vesicular Stomatitis Virus (VSV), hnRNP-U associates with the virus leader RNA, co-localizes with the virus in the cytoplasm and also is found packaged within the purified virions.[2]

Monoclonal antibodies specific to hnRNP-U are an important tool for studying the biology of RNA binding proteins.

Reagent

Monoclonal Anti-hnRNP-U is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody Concentration: ~2 mg/ml

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For prolonged storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in frost-free freezers is also not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working antibody concentration of 0.25-0.5 μg/ml is recommended using HeLa total cell extract.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

References

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5. Kiledjian, M., et al., EMBO J., **11**, 2655-2664 (1992).

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