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ProductInformation

Monoclonal Anti-hnRNP-C1/C2
Clone 4F4
Purified Mouse Immunoglobulin

Product Number **R 5028**

Product Description

Monoclonal Anti-hnRNP-C1/C2 (mouse IgG1isotype) is derived from the 4F4 hybridoma produced by the fusion of mouse myeloma cells (SP2/0 cells) and splenocytes from BALB/c mice immunized with RNPs eluted from oligo (dT) cellulose column.[1] The isotype is determined using Sigma ImmunoType™ Kit (Product Code ISO-1) and by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Product Code ISO-2).

Monoclonal Anti-hnRNP-C1/C2 recognizes human,[1, 2] monkey, hamster,[1] and chicken[1] hnRNP-C1/C2. The antibody may be used in ELISA, immunoblotting (approx. 41 and 43 kDa),[2] immunoprecipitation,[1] and immunocytochemistry.

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.[3] hnRNPs can be isolated either by immunoprecipitation or by sucrose gradient fractionation of cell extracts. When this is performed, the hnRNPs are isolated (consisting of protein groups named A to U), and many of these protein groups consist of more than one isoform. The major steady-state proteins of the isolated hnRNP complex are the A1, A2, B1, B2, C1, and C2 with a range of molecular weight starting with 34 kDa up to 43 kDa.[1] The hnRNP-C proteins have a single RNP motif RNA-binding domain (RBD) of 80 to 100 amino acid long. The hnRNP-C proteins preferentially bind to uridine-rich RNA sequences. Oligomerization of the protein through leucine rich regions in its C-terminal end is important for RNA binding.[4] Although its physiological action is unknown, mutation of the hnRNPC gene causes a embryonic lethal phenotype.[4]

Reagent

Monoclonal Anti-hnRNP-C1/C2 is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody Concentration: Approx. 2 mg/ml.

Precautions and Disclaimer

Due to the sodium azide content, a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS 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

By immunoblotting, a working antibody concentration of 0.1-0.2 µg/ml is recommended using HeLa cell nuclear extract.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.

References

1. Choi, Y.D., and Dreyfuss, G., Proc. Natl. Acad. Sci. USA, **81**, 7471-7475 (1984).
2. Pinol-Roma., S., et al., J. Cell Biol., **109**, 2575-2587 (1989).
3. Krecic, A.M., et al., Curr. Opin. Cell Biol., **11**, 2363-2371 (1999).
4. Williamson, D.J., et al., Mol. Cell. Biol., **20**, 4094-4105 (2000).

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