

Anti-Human mRNA-Binding Protein HuR, Mouse Monoclonal 19F12 (A-21277)

Quick Facts

Storage upon receipt:

- -20°C
- Desiccate

in western blots. It can also be used in supershift assays to confirm that HuR is present in an mRNA/protein complex. Anti-HuR will be very useful to investigators who want to determine whether HuR regulates the expression of their mRNA. Although we have not investigated species specificity, the peptide sequence is well conserved and so one might expect the antibody to crossreact with HuR of most species.

Introduction

The embryonic lethal abnormal vision (ELAV) family of RNA-binding proteins are a new class of gene expression regulators that bind to mRNAs and regulate their stability. The ELAV-like family is composed of four members: HuD (ElrD), HuC (ElrC and ple21), He1-N1 (HuB, Mel-N1 and ElrB) and HuR (HuA and ElrA). Three ELAV-family members HuD, HuC and He1-N1 are selectively expressed in neurons,¹⁻³ whereas HuR is expressed in a wide variety of proliferating cells.⁴ HuR binds to AU-rich elements (ARE) in the 3'-untranslated region of transcripts. The HuR mediates the hypoxic regulation of VEGF mRNA stability and the UV light induction of p21 waf1 expression.⁵ HuR binds specifically to the AREs located in the 3'-UTRs of mRNAs that encode growth-regulating proteins, including c-Fos, c-Myc, cyclin A, cyclin B1 and NOS II.⁷⁻⁹ However, it is likely that they regulate the expression of many other mRNAs specific for cytokines and transcription factors.

Molecular Probes offers an anti-HuR antibody that was generated against a unique peptide from the N-terminus of HuR. The anti-HuR mouse monoclonal 19F12 (isotype, IgG_{1,k}) works in immunohistochemical assays of paraffin-embedded tissue and

Material

Anti-human mRNA-binding protein HuR, mouse monoclonal 19F12, is provided in a 100 µg unit size. Upon receipt the lyophilized antibody should be stored desiccated at -20°C or lower. When properly stored, this product is stable for at least one year. To prepare a stock solution, reconstitute the antibody in 0.5–1 mL of phosphate-buffered saline, pH 7.4, containing 1% bovine serum albumin (BSA). Store the solution for up to two weeks at 4°C with the addition of 2 mM sodium azide. For longer storage, divide solution into single-use aliquots and freeze at -20°C. **AVOID REPEATED FREEZING AND THAWING.**

Applications

Because protocols vary with application, the appropriate dilution of the anti-HuR antibody should be determined empirically. We recommend trying an initial concentration of 5–20 µg/mL for immunohistochemistry, 1–5 µg/mL for Western blotting, 1–10 µg/mL for solid-phase immunoassay and 5–25 µg/mL for supershift assays.

References

1. Cell 67, 325 (1991); 2. Neurology 45, 544 (1995); 3. Mol Cell Biol 13, 3494 (1993); 4. J Neuroimmunol 92, 152 (1994); 5. Mol Cell Biol 20, 760 (2000); 6. EMBO J 17, 3448 (1998); 7. EMBO J 17, 3461 (1998); 8. EMBO J 19, 2340 (2000); 9. J Biol Chem 274, 26040 (2000).

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Cat #	Product Name	Unit Size
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