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ProductInformation

Anti-HuD
produced in rabbit, affinity isolated antibody

Catalog Number **H5789**

Product Description

Anti-HuD is developed in rabbit using a synthetic peptide corresponding to amino acid residues 240-255 of human HuD with a N-terminal added cysteine, conjugated to KLH, as immunogen. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-HuD specifically recognizes human and mouse HuD. Applications include immunoblotting (40 kDa) and immunohistochemistry. Detection of the HuD band by immunoblotting is specifically inhibited with the immunizing peptide.

The paraneoplastic neurologic disorders (PND) are neurologic syndromes that arise as an immune response to systemic tumor expressing neuronal proteins and develop into an autoimmune neuronal degeneration. The PND antigens were cloned by the use of autoantibodies from sera of patients. These antigens are grouped into three classes: neuron-specific RNA-binding proteins, nerve terminal vesicle-associated proteins, and cytoplasmic signaling proteins.[1-4] Four genes, HuA, HuB, HuC, and HuD, encode for the first group. The gene encoding HuD protein (also known as paraneoplastic encephalomeylitis antigen, PNEM, ELAVL4) has homologies with two *Drosophila* genes, “embryonic lethal abnormal vision - ELAV” and “sex lethal” that have a role in the maturation of *Drosophila* neurons and in sex determination.[2, 3]

HuD protein binds to the 3-prime UTR of mRNA of genes like N-myc gene and GAP43, and increases the half-life of these mRNA. The binding occurs in two distinct AU-rich regions of the mRNA of N-myc.[5] In cultured chicken neural crest cells, misexpression of HuD induces neuronal differentiation.[6] Activation of PKC in neuroblastoma cells (SH-SY5Y) causes not only the stabilization of many mRNAs by the HuB, HuC, and HuD proteins, but also the co-localization of these proteins with PKCα in the cytoskeleton.[7]

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide and 1% inactivated bovine serum albumin.

Antibody concentration: ~0.5 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 hazardous and safe handling practices.

Storage/Stability

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

Product Profile

Immunoblotting: a working concentration of 5-10 µg/mL is recommended using whole mouse brain extract, applying a chemiluminescent detection reagent.

Immunohistochemistry: a working concentration of 10-20 µg/mL is recommended using heat-retrieved, formalin-fixed, paraffin-embedded sections of human intestine.

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

References

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3. Robinow, S., et al., *Science*, **242**, 1570-1572 (1988).

4. Fletcher, C.F., et al., *Genomics*, **45**, 313-319 (1997).
5. Chagnovich, D., et al., *J. Biol. Chem*., **271**, 33587-33591 (1996).
6. Wakamatsu, Y., and Weston, J.A., Development, **124**, 3449-3460 (1997).
7. Pascale, A., et al., *Proc. Natl. Acad. Sci. USA*, **23**, 12065-12070 (2005).

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