



Polyclonal Antibody to RNASEH2A - Aff – Purified

Alternate names: Ribonuclease H2 subunit A, RNase H2 subunit A, RNase H2A, RNase HI large subunit, RNASEHI, RNHIA, AGS4, Ribonuclease HI subunit A, Ribonuclease HI large subunit, Aicardi-Goutieres syndrome 4 protein

Catalog No.: AP30734PU-N

Quantity: 0.1 mg

Concentration: 1 mg/ml

Background: Ribonucleases (RNAses) H are enzymes that hydrolyze the RNA strands of RNA/DNA hybrids. The major role of these enzymes is to remove the RNA strand from the RNA/DNA hybrids that form during DNA replication and repair. RNase H2 is made up of three subunits; all three are required for RNase activity. Recent evidence has demonstrated that mutations in RNase H2A or any of the other subunits result in Aicardi-Goutieres syndrome (AGS), a neurological disorder with similar symptoms to viral brain infections including high levels of IFN-alpha in the cerebral spinal fluid. Similar conditions are observed with mutations in TREX1, a single-stranded DNA exonuclease, suggesting that RNase H2 and TREX1 may have similar roles, and that mutations in any of these genes lead to an accumulation of intracellular nucleic acids, triggering an inflammatory response through activation of the innate immune system.

Uniprot ID: O75792

NCBI: O75792

GeneID: 10535

Host / Isotype: Rabbit / IgG

Immunogen: RNase H2A antibody was raised against a 17 amino acid peptide near the center of human RNase H2A.

Format: State: Liquid Ig fraction

Purification: Peptide affinity chromatography

Buffer System: PBS containing 0.02% sodium azide

Applications: ELISA. **Western blot:** 1 – 2 µg/ml. **Immunocytochemistry.** Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity: This antibody detects RNase H2A.

Species Reactivity: Tested: Human, mouse, rat

Add. Information: Blocking peptide available: AP30734CP-N

For research and in vitro use only. Not for diagnostic or therapeutic work

Storage: Store at 2 - 8 °C.

Shelf life: one year from despatch.

General References: 1. Stein H and Hausen P. Enzyme from calf thymus degrading the RNA moiety of DNA-RNA hybrids: effect on DNA-dependent RNA polymerase. Science 1969; 166:393-5.

2. Cerritelli SM and Crouch RJ. Ribonuclease H: the enzymes in eukaryotes. FEBS J. 2009;

276:1494-505.

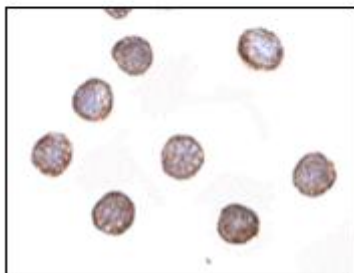
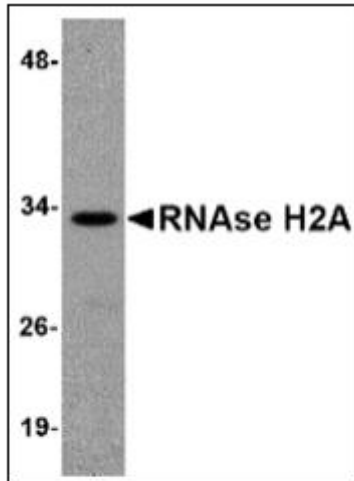
3. Jeong HS, Backlund PS, Chen HC, et al. RNase H2 of *Saccharomyces cerevisiae* is a complex of three proteins. Nuc. Acids Res. 2004; 32:407-14.

4. Crow YJ, Leitch A, Hayward BE, et al. Mutations in genes encoding ribonuclease H2

subunits cause Aicardi-Goutieres syndrome and mimic congenital viral brain infection. Nat.

Genet. 2006; 38:910-6.

Pictures:



Western blot analysis of RNase H2A in HeLa cell lysate with AP30734PU-N at 1 $\mu\text{g}/\text{ml}$.

Immunocytochemistry of RNase H2A in HeLa cells with AP30734PU-N at 2 $\mu\text{g}/\text{ml}$.

Recommended

Control Peptides:

AP30734CP-N