

RNase HII-A (V-23): sc-133963

BACKGROUND

The RNase HII complex is an endonuclease that degrades RNA found in RNA:DNA duplexes and is composed of one catalytic subunit and two non-catalytic subunits. RNase HII-A, also called RNASEH2A (ribonuclease H2 subunit A), RNASEHI, AGS4 or RNHIA, is the 299 amino acid catalytic subunit of RNase HII. Localized to the nucleus, RNase HII-A mediates the removal of Okazaki fragment RNA primers that are present on the lagging strand during DNA replication. RNase HII-A catalyzes the endonucleolytic cleavage of RNA to a 5'-phosphomonoester and is able to bind magnesium or manganese as cofactors. Defects in the gene encoding RNase HII-A are the cause of Aicardi-Goutieres syndrome type 4 (AGS4), an autosomal recessive encephalopathy characterized by cerebral atrophy, leukodystrophy, intracranial calcifications and chronic cerebrospinal fluid (CSF) lymphocytosis. Patients affected by AGS4 have severe neurological dysfunctions and often die in early childhood.

REFERENCES

1. Frank, P., et al. 1998. Cloning of the cDNA encoding the large subunit of human RNase HI, a homologue of the prokaryotic RNase HII. Proc. Natl. Acad. Sci. USA 95: 12872-12877.
2. ten Asbroek, A.L., et al. 2002. The involvement of human ribonucleases H1 and H2 in the variation of response of cells to antisense phosphorothioate oligonucleotides. Eur. J. Biochem. 269: 583-592.

CHROMOSOMAL LOCATION

Genetic locus: RNASEH2A (human) mapping to 19p13.13.

SOURCE

RNase HII-A (V-23) is an affinity purified rabbit polyclonal antibody raised against synthetic RNase HII-A peptide of human origin.

PRODUCT

Each vial contains 50 µg IgG in 500 µl PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

RNase HII-A (V-23) is recommended for detection of RNase HII-A of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for RNase HII-A siRNA (h): sc-62954, RNase HII-A shRNA Plasmid (h): sc-62954-SH and RNase HII-A shRNA (h) Lentiviral Particles: sc-62954-V.

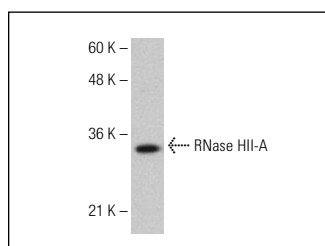
Molecular Weight of RNase HII-A: 33 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or human kidney tissue.

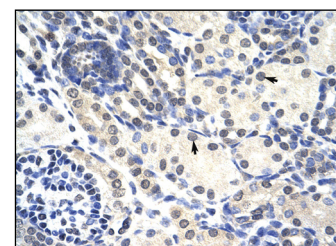
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



RNase HII-A (V-23): sc-133963. Western blot analysis of RNase HII-A expression in Jurkat whole cell lysate.



RNase HII-A (V-23): sc-133963. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human kidney tissue showing nuclear and cytoplasmic localization.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

MONOS
Satisfaction
Guaranteed

Try **RNase HII-A (G-10): sc-515475** or **RNase HII-A (S-14LJ-17): sc-101112**, our highly recommended monoclonal alternatives to RNase HII-A (V-23).