

BAT1/DDX39 (H-198): sc-68342

BACKGROUND

BAT1 (spliceosome RNA helicase BAT1), also known as DEAD-box protein UAP56 (56 kDa U2AF65-associated protein), HLA-B associated transcript-1 or ATP-dependent RNA helicase p47, is a member of the DECD subfamily of DEAD-box helicases. Important for mRNA splicing and nuclear export, BAT1 interacts with the mRNA export factor ALY and also functions as a splicing factor, mediating the first ATP-dependent step of spliceosome assembly. BAT1 associates with transcription elongation factor THO proteins, forming the TREX complex, and also interacts with splicing machinery to form the exon junction complex. Due to alternative splicing events, BAT1 exists in two isoforms. DDX39 (DEAD box protein 39), like BAT1, is a member of the DEAD-box family of helicases. Localized to the nucleus and expressed in lung, brain, kidney, spleen, thymus and salivary gland, DDX39 functions in a similar manner to BAT1 and is involved in pre-mRNA splicing and mRNA export out of the nucleus. DDX39 expression is upregulated in lung squamous cell carcinoma, suggesting a role for DDX39 in tumorigenesis.

REFERENCES

1. Fleckner, J., et al. 1997. U2AF65 recruits a novel human DEAD box protein required for the U2 snRNP-branchpoint interaction. *Genes Dev.* 11: 1864-1872.
2. Momose, F., et al. 2001. Cellular splicing factor RAF-2p48/NPI-5/BAT1/UAP56 interacts with the influenza virus nucleoprotein and enhances viral RNA synthesis. *J. Virol.* 75: 1899-1908.
3. Luo, M.L., et al. 2001. Pre-mRNA splicing and mRNA export linked by direct interactions between UAP56 and Aly. *Nature* 413: 644-647.
4. Price, P., et al. 2004. Polymorphisms at positions -22 and -348 in the promoter of the BAT1 gene affect transcription and the binding of nuclear factors. *Hum. Mol. Genet.* 13: 967-974.
5. Shi, H., et al. 2004. Crystal structure of the human ATP-dependent splicing and export factor UAP56. *Proc. Natl. Acad. Sci. USA* 101: 17628-17633.

CHROMOSOMAL LOCATION

Genetic locus: DDX39B (human) mapping to 6p21.33, DDX39A (human) mapping to 19p13.12; Ddx39b (mouse) mapping to 17 B1, Ddx39 (mouse) mapping to 8 C2.

SOURCE

BAT1/DDX39 (H-198) is a rabbit polyclonal antibody raised against amino acids 231-428 mapping at the C-terminus of BAT1 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

BAT1/DDX39 (H-198) is recommended for detection of BAT1 and DDX39 of mouse, rat and 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).

BAT1/DDX39 (H-198) is also recommended for detection of BAT1 and DDX39 in additional species, including equine, canine, bovine, porcine and avian.

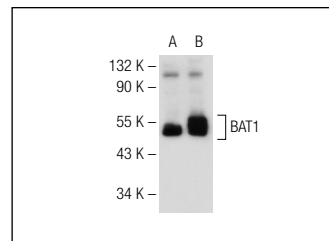
Molecular Weight of BAT1/DDX39: 48 kDa.

Positive Controls: BAT1 (h2): 293T Lysate: sc-172041, K-562 nuclear extract: sc-2130 or HeLa whole cell lysate: sc-2200.

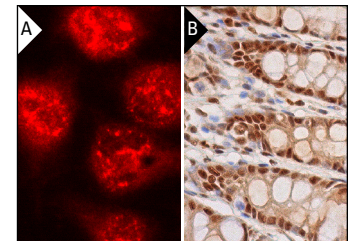
RECOMMENDED SECONDARY REAGENTS

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



BAT1/DDX39 (H-198): sc-68342. Western blot analysis of BAT1 expression in non-transfected: sc-117752 (A) and human BAT1 transfected: sc-172041 (B) 293T whole cell lysates.



BAT1/DDX39 (H-198): sc-68342. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing nuclear staining of glandular cells (B).

RESEARCH USE

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

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Try **BAT1/DDX39 (H-6): sc-271395**, our highly recommended monoclonal alternative to BAT1/DDX39 (H-198).