

APOBEC3H (Y-17): sc-86070

BACKGROUND

APOBEC3H (apolipoprotein B mRNA editing enzyme, catalytic polypeptide-like 3H), also known as ARP10, is a 200 amino acid protein that belongs to the cytidine and deoxycytidylate deaminase family. Highly expressed in ovary, testis, colon, cerebellum, skin and fetal liver, APOBEC3H uses zinc as a co-factor to catalyze the deamination of cytidine to produce uridine, a reaction that edits mRNA and increases protein diversity. Additionally, via its catalytic activity, APOBEC3H can inhibit retroviral replication and it is thought to play a role in intrinsic immune system defense mechanisms. Overexpression of APOBEC3H may be associated with the formation of tumors, suggesting a role for APOBEC3H in carcinogenesis. Two isoforms of APOBEC3H exist due to alternative splicing events.

REFERENCES

1. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 610976. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
2. Wedekind, J.E., Dance, G.S., Sowden, M.P. and Smith, H.C. 2003. Messenger RNA editing in mammals: new members of the APOBEC family seeking roles in the family business. *Trends Genet.* 19: 207-216.
3. Oh Ainle, M., Kerns, J.A., Malik, H.S. and Emerman, M. 2006. Adaptive evolution and antiviral activity of the conserved mammalian cytidine deaminase APOBEC3H. *J. Virol.* 80: 3853-3862.
4. Dang, Y., Siew, L.M., Wang, X., Han, Y., Lampen, R. and Zheng, Y.H. 2008. Human cytidine deaminase APOBEC3H restricts HIV-1 replication. *J. Biol. Chem.* 283: 11606-11614.
5. Köck, J. and Blum, H.E. 2008. Hypermutation of hepatitis B virus genomes by APOBEC3G, APOBEC3C and APOBEC3H. *J. Gen. Virol.* 89: 1184-1191.
6. Vartanian, J.P., Guetard, D., Henry, M. and Wain-Hobson, S. 2008. Evidence for editing of human papillomavirus DNA by APOBEC3 in benign and pre-cancerous lesions. *Science* 320: 230-233.

CHROMOSOMAL LOCATION

Genetic locus: APOBEC3H (human) mapping to 22q13.1.

SOURCE

APOBEC3H (Y-17) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of APOBEC3H of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-86070 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

APOBEC3H (Y-17) is recommended for detection of APOBEC3H 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for APOBEC3H siRNA (h): sc-72517, APOBEC3H shRNA Plasmid (h): sc-72517-SH and APOBEC3H shRNA (h) Lentiviral Particles: sc-72517-V.

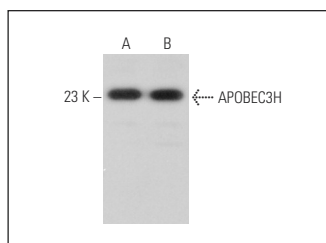
Molecular Weight of APOBEC3H: 24 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or K-562 whole cell lysate: sc-2203.

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.

DATA



APOBEC3H (Y-17): sc-86070. Western blot analysis of APOBEC3H expression in HeLa (A) and K-562 (B) whole cell lysates.

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.