

# APOBEC4 (H-300): sc-134884

## BACKGROUND

APOBEC (apolipoprotein B mRNA editing enzyme, catalytic) proteins inhibit retroviruses by deaminating cytosine residues of viral RNA and DNA. APOBEC4 (apolipoprotein B mRNA editing enzyme, catalytic polypeptide-like 4), also known as C1orf169, is a 367 amino acid protein that belongs to the AID/APOBEC family of polynucleotide deoxycytidine deaminases whose primary function is to catalyze the conversion of cytidine to uridine. Expressed predominantly in testis, APOBEC4 uses zinc as a cofactor to convert cytidine to uridine, an event that is important for RNA editing. The gene encoding APOBEC4 maps to human chromosome 1, which spans 260 million base pairs, contains over 3,000 genes and comprises nearly 8% of the human genome. Chromosome 1 houses a large number of disease-associated genes, including those that are involved in familial adenomatous polyposis, Stickler syndrome, Parkinson's disease, Gaucher disease, schizophrenia and Usher syndrome. Aberrations in chromosome 1 are found in a variety of cancers, including head and neck cancer, malignant melanoma and multiple myeloma.

## REFERENCES

1. Rogozin, I.B., et al. 2005. APOBEC4, a new member of the AID/APOBEC family of polynucleotide (deoxy)cytidine deaminases predicted by computational analysis. *Cell Cycle* 4: 1281-1285.
2. Weise, A., et al. 2005. New insights into the evolution of chromosome 1. *Cytogenet. Genome Res.* 108: 217-222.
3. Conticello, S.G., et al. 2005. Evolution of the AID/APOBEC family of polynucleotide (deoxy)cytidine deaminases. *Mol. Biol. Evol.* 22: 367-377.
4. Marzin, Y., et al. 2006. Chromosome 1 abnormalities in multiple myeloma. *Anticancer Res.* 26: 953-959.
5. Navaratnam, N. and Sarwar, R. 2006. An overview of cytidine deaminases. *Int. J. Hematol.* 83: 195-200.
6. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 609908. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
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## CHROMOSOMAL LOCATION

Genetic locus: APOBEC4 (human) mapping to 1q25.3; Apobec4 (mouse) mapping to 1 G3.

## SOURCE

APOBEC4 (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 mapping at the N-terminus of APOBEC4 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.

## RESEARCH USE

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

## APPLICATIONS

APOBEC4 (H-300) is recommended for detection of APOBEC4 of human and, to a lesser extent, mouse and rat 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).

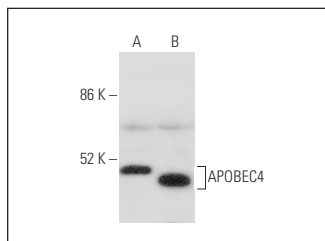
Suitable for use as control antibody for APOBEC4 siRNA (h): sc-88795, APOBEC4 siRNA (m): sc-105082, APOBEC4 shRNA Plasmid (h): sc-88795-SH, APOBEC4 shRNA Plasmid (m): sc-105082-SH, APOBEC4 shRNA (h) Lentiviral Particles: sc-88795-V and APOBEC4 shRNA (m) Lentiviral Particles: sc-105082-V.

Molecular Weight of APOBEC4: 42 kDa.

## 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



APOBEC4 (H-300): sc-134884. Western blot analysis of APOBEC4 expression in PC-12 (A) and Neuro-2A (B) whole cell lysates.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.