

# APOBEC3A/B (D-15): sc-86289

## BACKGROUND

APOBEC3A (apolipoprotein B mRNA editing enzyme, catalytic polypeptide-like 3A), also known as ARP3 or PHRBN is a 199 amino acid protein that belongs to the cytidine deaminase family. Expressed in keratinocytes, as well as in peripheral leukocytes, APOBEC3A may be implicated in cell growth and cell cycle control. The gene encoding APOBEC3A is one of seven related genes which map to a cluster on chromosome 22 and are thought to play a role in tumor transformation and metastasis, as well as in host-associated antiviral activity. APOBEC3B (apolipoprotein B mRNA editing enzyme, catalytic polypeptide-like 3B), a 382 amino acid protein that is expressed in spleen, testis, ovary and heart, is also encoded by a gene that maps to the oncogenic cluster on chromosome 22. APOBEC3B uses zinc to catalyze reactions that may play important roles in cell growth and development.

## REFERENCES

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- Bogerd, H.P., et al. 2006. APOBEC3A and APOBEC3B are potent inhibitors of LTR-retrotransposon function in human cells. *Nucleic Acids Res.* 34: 89-95.
- Goila-Gaur, R., et al. 2007. Targeting APOBEC3A to the viral nucleoprotein complex confers antiviral activity. *Retrovirology* 4: 61.
- Marin, M., et al. 2008. Human immunodeficiency virus type 1 Vif functionally interacts with diverse APOBEC3 cytidine deaminases and moves with them between cytoplasmic sites of mRNA metabolism. *J. Virol.* 82: 987-998.
- Vartanian, J.P., et al. 2008. Evidence for editing of human papillomavirus DNA by APOBEC3 in benign and precancerous lesions. *Science* 320: 230-233.
- Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 607109. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: APOBEC3A/APOBEC3B (human) mapping to 22q13.1.

## SOURCE

APOBEC3A/B (D-15) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of APOBEC3A of human origin.

## STORAGE

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

## 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-86289 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

APOBEC3A/B (D-15) is recommended for detection of APOBEC3A and APOBEC3B 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); non cross-reactive with APOBEC3B isoform 2.

Molecular Weight of APOBEC3A: 23 kDa.

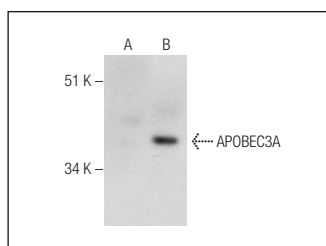
Molecular Weight of APOBEC3B: 46 kDa.

Positive Controls: APOBEC3A (h): 293T Lysate: sc-127982.

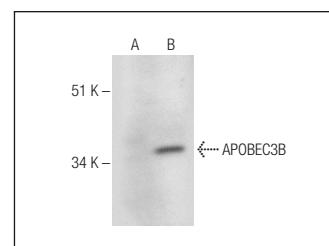
## RECOMMENDED SECONDARY REAGENTS

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<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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<sup>™</sup> Mounting Medium: sc-24941.

## DATA



APOBEC3A/B (D-15): sc-86289. Western blot analysis of APOBEC3A expression in non-transfected: sc-117752 (A) and human APOBEC3A transfected: sc-127982 (B) 293T whole cell lysates.



APOBEC3A/B (D-15): sc-86289. Western blot analysis of APOBEC3B expression in non-transfected: sc-117752 (A) and human APOBEC3B transfected: sc-127984 (B) 293T whole cell lysates.

## RESEARCH USE

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