

APOBEC2 (B-12): sc-365151



The Power to Question

BACKGROUND

Apolipoprotein B mRNA editing enzyme, catalytic polypeptide-like 2 (APOBEC2) is a 224 amino acid protein that belongs to the cytidine and deoxycytidylate deaminase family. Expressed exclusively in heart and skeletal muscle, APOBEC2 is thought to be a probable C (cytidine) to U (uridine) editing enzyme. However, unlike other members of the family, such as APOBEC1, which mediates the editing of apolipoprotein (apo) B mRNA, APOBEC2 does not display any detectable apoB mRNA editing activity. Also, APOBEC2 has been shown to have low, but definite, intrinsic cytidine deaminase activity.

REFERENCES

- Liao, W., et al. 1999. APOBEC2, a cardiac- and skeletal muscle-specific member of the cytidine deaminase supergene family. *Biochem. Biophys. Res. Commun.* 260: 398-404.
- Xie, K., et al. 2004. The structure of a yeast RNA-editing deaminase provides insight into the fold and function of activation-induced deaminase and APOBEC1. *Proc. Natl. Acad. Sci. USA* 101: 8114-8119.
- Conticello, S.G., et al. 2005. Evolution of the AID/APOBEC family of polynucleotide (deoxy)cytidine deaminases. *Mol. Biol. Evol.* 22: 367-377.
- Mikl, M.C., et al. 2005. Mice deficient in APOBEC2 and APOBEC3. *Mol. Cell. Biol.* 25: 7270-7277.
- Huthoff, H., et al. 2005. Cytidine deamination and resistance to retroviral infection: towards a structural understanding of the APOBEC proteins. *Virology* 334: 147-153.
- Navaratnam, N., et al. 2006. An overview of cytidine deaminases. *Int. J. Hematol.* 83: 195-200.

CHROMOSOMAL LOCATION

Genetic locus: APOBEC (human) mapping to 6p21.1; Apobec2 (mouse) mapping to 17 C.

SOURCE

APOBEC2 (B-12) is a mouse monoclonal antibody raised against amino acids 1-224 representing full length APOBEC2 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APOBEC2 (B-12) is available conjugated to agarose (sc-365151 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365151 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365151 PE), fluorescein (sc-365151 FITC), Alexa Fluor® 488 (sc-365151 AF488), Alexa Fluor® 546 (sc-365151 AF546), Alexa Fluor® 594 (sc-365151 AF594) or Alexa Fluor® 647 (sc-365151 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-365151 AF680) or Alexa Fluor® 790 (sc-365151 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

APOBEC2 (B-12) is recommended for detection of APOBEC2 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

APOBEC2 (B-12) is also recommended for detection of APOBEC2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for APOBEC2 siRNA (h): sc-95404, APOBEC2 siRNA (m): sc-141158, APOBEC2 shRNA Plasmid (h): sc-95404-SH, APOBEC2 shRNA Plasmid (m): sc-141158-SH, APOBEC2 shRNA (h) Lentiviral Particles: sc-95404-V and APOBEC2 shRNA (m) Lentiviral Particles: sc-141158-V.

Molecular Weight (predicted) of APOBEC2: 26 kDa.

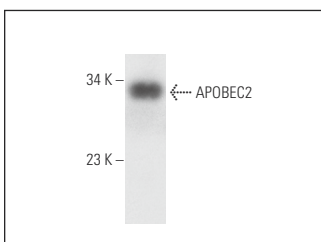
Molecular Weight (observed) of APOBEC2: 32 kDa.

Positive Controls: Sol8 cell lysate: sc-2249 or mouse skeletal muscle extract: sc-364250.

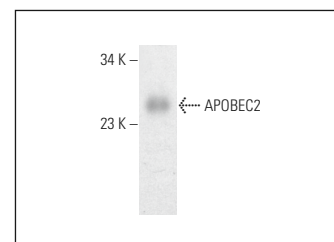
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



APOBEC2 (B-12): sc-365151. Western blot analysis of APOBEC2 expression in Sol8 whole cell lysate.



APOBEC2 (B-12): sc-365151. Western blot analysis of APOBEC2 expression in mouse skeletal muscle tissue extract.

STORAGE

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

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