SANTA CRUZ BIOTECHNOLOGY, INC.

APOBEC2 (B-12): sc-365151

SANTA CRUZ BIOTECHNOLOGY

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

1. 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.
2. 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.
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. Mikl, M.C., et al. 2005. Mice deficient in APOBEC2 and APOBEC3. Mol. Cell. Biol. 25: 7270-7277.
5. Huthoff, H., et al. 2005. Cytidine deamination and resistance to retroviral infection: towards a structural understanding of the APOBEC proteins. Virology 334: 147-153.
6. Navaratnam, N., et al. 2006. An overview of cytidine deaminases. Int. J. Hematol. 83: 195-200.
7. Conticello, S.G., et al. 2007. DNA deamination in immunity: AID in the context of its APOBEC relatives. Adv. Immunol. 94: 37-73.

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 IgG_1 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.

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.

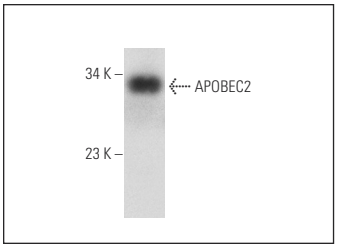
Molecular Weight (observed) of APOBEC2: 32 kDa.

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

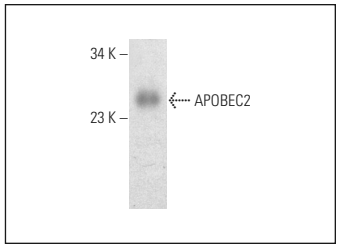
RECOMMENDED SUPPORT REAGENTS

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.

RESEARCH USE

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