

APOBEC3G (D-24): sc-130689

BACKGROUND

APOBEC3G (apolipoprotein B mRNA-editing enzyme, catalytic polypeptide-like 3G) is a member of a family of enzymes that have potent DNA mutator activity. APOBEC3G deaminates deoxycytosine to deoxyuracil in the minus strand of HIV-1 DNA, resulting in G to A hypermutation in the plus strand of DNA. Thus, APOBEC3G provides a mechanism for innate immunity to retroviruses and also likely contributes to sequence variation observed in many viruses. Viral infectivity factor (VIF) imparts APOBEC3G resistance to HIV through impaired translation of APOBEC3G mRNA and accelerated posttranslational degradation of APOBEC3G by the 26S Proteasome. Interestingly, HIV-1 VIF cannot form a complex with APOBEC3G of mouse origin as it does with the human protein, and thus mouse APOBEC3G functions as a potent inhibitor of wild type HIV-1 replication, where human APOBEC3G is only able to inhibit VIF-deficient HIV-1 replication. This implies that induction of APOBEC3G activity or a method of blocking its interaction with VIF may provide a method for therapeutic intervention. CEM15 is a 429 amino acid mouse protein that is thought to function as an ortholog of human APOBEC3G.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: APOBEC3G (human) mapping to 22q13.1.

SOURCE

APOBEC3G (D-24) is a purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of APOBEC3G of human origin.

RESEARCH USE

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

PRODUCT

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

APPLICATIONS

APOBEC3G (D-24) is recommended for detection of APOBEC3G of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

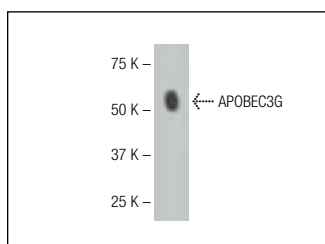
Suitable for use as control antibody for APOBEC3G siRNA (h): sc-60091, APOBEC3G shRNA Plasmid (h): sc-60091-SH and APOBEC3G shRNA (h) Lentiviral Particles: sc-60091-V.

Molecular Weight of APOBEC3G: 48 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) 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. 3) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



APOBEC3G (D-24): sc-130689. Western blot analysis of APOBEC3G expression in HL-60 whole cell lysate.

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 or our catalog for detailed protocols and support products.