APOBEC3B (h4): 293T Lysate: sc-127987



The Power to Question

BACKGROUND

APOBEC (apolipoprotein B mRNA editing enzyme, catalytic) proteins inhibit retroviruses by deaminating cytosine residues of viral RNA and DNA. The seven APOBEC3 genes or pseudogenes are found in a cluster thought to result from gene duplication on chromosome 22. APOBEC3 proteins are thought to be RNA editing enzymes and have roles in cell growth. APOBEC3B, also known as phorbolin-1-related protein or phorbolin-2/3, is a 382 amino acid protein belonging to the cytidine and deoxycytidylate deaminase family. APOBEC3B lacks cytidine deaminase activity on RNA molecules, but has been shown to bind to apoB and AU-rich RNAs. APOBEC3B forms a homodimer and interacts with APOBEC3G. APOBEC3B is expressed at at moderate levels in heart, testes, thymus, prostate, ovary, spleen and peripheral blood leukocytes.

REFERENCES

- 1. Jarmuz, A., Chester, A., Bayliss, J., Gisbourne, J., Dunham, I., Scott, J. and Navaratnam, N. 2002. An anthropoid-specific locus of orphan C to U RNA-editing enzymes on chromosome 22. Genomics 79: 285-296.
- Wedekind, J.E., Dance, G.S., Sowden, M.P. and Smith, H.C. 2003.
 Messenger RNA editing in mammals: new members of the APOBEC family seeking roles in the family business. Trends Genet. 19: 207-216.
- 3. Yu, Q., Chen, D., König, R., Mariani, R., Unutmaz, D. and Landau, N.R. 2004. APOBEC3B and APOBEC3C are potent inhibitors of simian immunodeficiency virus replication. J. Biol. Chem. 279: 53379-53386.
- 4. Rose, K.M., Marin, M., Kozak, S.L. and Kabat, D. 2005. Regulated production and anti-HIV type 1 activities of cytidine deaminases APOBEC3B, 3F, and 3G. AIDS Res. Hum. Retroviruses 21: 611-619.
- Stenglein, M.D. and Harris, R.S. 2006. APOBEC3B and APOBEC3F inhibit L1 retrotransposition by a DNA deamination-independent mechanism.
 J. Biol. Chem. 281: 16837-16841.
- Hakata, Y. and Landau, N.R. 2006. Reversed functional organization of mouse and human APOBEC3 cytidine deaminase domains. J. Biol. Chem. 281: 36624-36631.
- Bonvin, M. and Greeve, J. 2007. Effects of point mutations in the cytidine deaminase domains of APOBEC3B on replication and hypermutation of hepatitis B virus in vitro. J. Gen. Virol. 88: 3270-3274.
- Kidd, J.M., Newman, T.L., Tuzun, E., Kaul, R. and Eichler, E.E. 2007.
 Population stratification of a common APOBEC gene deletion polymorphism.
 PLoS Genet. 3: e63.
- 9. Vartanian, J.P., Guetard, D., Henry, M. and Wain-Hobson, S. 2008. Evidence for editing of human papillomavirus DNA by APOBEC3 in benign and precancerous lesions. Science 320: 230-233.

CHROMOSOMAL LOCATION

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

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PRODUCT

APOBEC3B (h4): 293T Lysate represents a lysate of human APOBEC3B transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

APOBEC3B (h4): 293T Lysate is suitable as a Western Blotting positive control for human reactive APOBEC3B antibodies. Recommended use: 10-20 μ l per lane

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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