

APOBEC3B (h): 293T Lysate: sc-116560

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 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.
2. 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.
5. 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.
6. Hakata, Y. and Landau, N.R. 2006. Reversed functional organization of mouse and human APOBEC3 cytidine deaminase domains. *J. Biol. Chem.* 281: 36624-36631.
7. 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.
8. 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 pre-cancerous 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 (h): 293T Lysate represents a lysate of human APOBEC3B transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

APOBEC3B (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive APOBEC3B antibodies. Recommended use: 10-20 µl 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.