

NFAM1 (h): 293T Lysate: sc-115683

BACKGROUND

NFAM1 (NFAT activating protein with ITAM motif 1), also known as CNAIP, is a 270 amino acid single-pass type I membrane protein that contains one ITAM domain and one immunoglobulin-like domain and is subject to glycosylation on its N-terminus. Highly expressed in mast cells, lymphocytes and primary monocytes and expressed at lower levels in non-immune tissue, NFAM1 interacts with ZAP-70 and Syk and is thought to function as a receptor, activating both cytokine gene promoters and the NFAT signaling pathway. Additionally, NFAM1 may play an important role in the regulation of B-cell development, thereby mediating immune system function. The gene encoding NFAM1 maps to human chromosome 22q13.2, which houses over 500 genes and is the second smallest human chromosome. Mutations in several of the genes that map to chromosome 22 are involved in the development of Phelan-McDermid syndrome, Neurofibromatosis type 2, autism and schizophrenia.

REFERENCES

1. Yang, J., Hu, G., Wang, S.W., Li, Y., Martin, R., Li, K. and Yao, Z. 2003. Calcineurin/nuclear factors of activated T cells (NFAT)-activating and immunoreceptor tyrosine-based activation motif (ITAM)-containing protein (CNAIP), a novel ITAM-containing protein that activates the calcineurin/NFAT-signaling pathway. *J. Biol. Chem.* 278: 16797-16801.
2. Ohtsuka, M., Arase, H., Takeuchi, A., Yamasaki, S., Shiina, R., Suenaga, T., Sakurai, D., Yokosuka, T., Arase, N., Iwashima, M., Kitamura, T., Moriya, H. and Saito, T. 2004. NFAM1, an immunoreceptor tyrosine-based activation motif-bearing molecule that regulates B cell development and signaling. *Proc. Natl. Acad. Sci. USA* 101: 8126-8131.
3. Choi, J., Walker, J., Talbert-Slagle, K., Wright, P., Pober, J.S. and Alexander, L. 2005. Endothelial cells promote human immunodeficiency virus replication in nondividing memory T cells via Nef-, Vpr-, and T-cell receptor-dependent activation of NFAT. *J. Virol.* 79: 11194-11204.
4. Nilsson, L.M., Sun, Z.W., Nilsson, J., Nordström, I., Chen, Y.W., Molkentin, J.D., Wide-Svensson, D., Hellstrand, P., Lydrup, M.L. and Gomez, M.F. 2007. Novel blocker of NFAT activation inhibits IL-6 production in human myometrial arteries and reduces vascular smooth muscle cell proliferation. *Am. J. Physiol., Cell Physiol.* 292: C1167-C1178.
5. Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 608740. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
6. Schneider, H. and Rudd, C.E. 2008. CD28 and GRB2, relative to Gads or Grap, preferentially cooperate with Vav1 in the activation of NFAT/AP-1 transcription. *Biochem. Biophys. Res. Commun.* 369: 616-621.
7. Manley, K., O'Hara, B.A. and Atwood, W.J. 2008. Nuclear factor of activated T-cells (NFAT) plays a role in SV40 infection. *Virology* 372: 48-55.

CHROMOSOMAL LOCATION

Genetic locus: NFAM1 (human) mapping to 22q13.2.

PRODUCT

NFAM1 (h): 293T Lysate represents a lysate of human NFAM1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

NFAM1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive NFAM1 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.

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.

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.