

# TNF $\alpha$ -IP 1 (C-19): sc-82051

## BACKGROUND

TNF $\alpha$ -IP 1 (tumor necrosis factor,  $\alpha$ -induced protein 1, endothelial), also known as B12, B61, EDP1 or TNFAIP1, is a BTB/POZ domain-containing protein that belongs to the KCTD10/KCTD13/TNFAIP1 family. TNF $\alpha$ -IP 1 contains one BTB/POZ motif, which is known to mediate homomeric and heteromeric POZ-POZ interactions and is common to transcriptional regulators involved in chromatin modeling. The expression of TNF $\alpha$ -IP 1 can be induced by IL-6 (interleukin-6) and by TNF $\alpha$  in the umbilical vein of endothelial cells. TNF $\alpha$ -IP 1 may be involved in DNA repair, DNA synthesis, cell apoptosis and human diseases. TNF $\alpha$ -IP 1 is suggested to play a role in the process of cancer and in the innate immunity against the Hepatitis B virus.

## REFERENCES

- Swift, S., Blackburn, C., Morahan, G. and Ashworth, A. 1998. Structure and chromosomal mapping of the TNF $\alpha$  inducible endothelial protein 1 (Edp1) gene in the mouse. *Biochim. Biophys. Acta* 1442: 394-398.
- Link, C.D., Taft, A., Kapulkin, V., Duke, K., Kim, S., Fei, Q., Wood, D.E. and Sahagan, B.G. 2003. Gene expression analysis in a transgenic *Caenorhabditis elegans* Alzheimer's disease model. *Neurobiol. Aging* 24: 397-413.
- Zhou, J., Hu, X., Xiong, X., Liu, X., Liu, Y., Ren, K., Jiang, T., Hu, X. and Zhang, J. 2005. Cloning of two rat PDIP1 related genes and their interactions with proliferating cell nuclear antigen. *J. Exp. Zool. Part A Comp. Exp. Biol.* 303: 227-240.
- Lin, M.C., Lee, N.P., Zheng, N., Yang, P.H., Wong, O.G., Kung, H.F., Hui, C.K., Luk, J.M. and Lau, G.K. 2005. Tumor necrosis factor  $\alpha$ -induced protein 1 and immunity to hepatitis B virus. *World J. Gastroenterol.* 11: 7564-7568.
- Yang, L.P., Zhou, A.D., Li, H., Zhang, W.F., Wu, Y.Y., Zhang, J. and Han, M. 2006. Expression profile in the cell lines of human TNFAIP1 gene. *Yi Chuan* 28: 918-922.
- Ghanim, H., Aljada, A., Daoud, N., Deopurkar, R., Chaudhuri, A. and Dandona, P. 2007. Role of inflammatory mediators in the suppression of Insulin receptor phosphorylation in circulating mononuclear cells of obese subjects. *Diabetologia* 50: 278-285.
- Wang, M., Windgassen, D. and Papoutsakis, E.T. 2008. Comparative analysis of transcriptional profiling of CD3<sup>+</sup>, CD4<sup>+</sup> and CD8<sup>+</sup> T cells identifies novel immune response players in T-cell activation. *BMC Genomics* 9: 225.
- Ding, X., Luo, C., Zhou, J., Zhong, Y., Hu, X., Zhou, F., Ren, K., Gan, L., He, A., Zhu, J., Gao, X. and Zhang, J. 2009. The interaction of KCTD1 with transcription factor AP-2 $\alpha$  inhibits its transactivation. *J. Cell. Biochem.* 106: 285-295.

## CHROMOSOMAL LOCATION

Genetic locus: TNFAIP1 (human) mapping to 17q11.2; Tnfaip1 (mouse) mapping to 11 B5.

## SOURCE

TNF $\alpha$ -IP 1 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of TNF $\alpha$ -IP 1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-82051 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

TNF $\alpha$ -IP 1 (C-19) is recommended for detection of TNF $\alpha$ -IP 1 of mouse, rat and 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

TNF $\alpha$ -IP 1 (C-19) is also recommended for detection of TNF $\alpha$ -IP 1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for TNF $\alpha$ -IP 1 siRNA (h): sc-76696, TNF $\alpha$ -IP 1 siRNA (m): sc-76697, TNF $\alpha$ -IP 1 shRNA Plasmid (h): sc-76696-SH, TNF $\alpha$ -IP 1 shRNA Plasmid (m): sc-76697-SH, TNF $\alpha$ -IP 1 shRNA (h) Lentiviral Particles: sc-76696-V and TNF $\alpha$ -IP 1 shRNA (m) Lentiviral Particles: sc-76697-V.

Molecular Weight of TNF $\alpha$ -IP 1: 36 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.