

FAT10 (T-18): sc-51086

BACKGROUND

FAT10, also designated Ubiquitin D or Diubiquitin, is a 165 amino acid protein encoded in the major histocompatibility complex (MHC) that consists of 2 domains which share significant homology with ubiquitin. Each domain contains two cysteines, along with a free C-terminal diglycine motif required for FAT10 conjugate formation. FAT10 is inducible by interferon- γ and tumor necrosis factor α (TNF α). The FAT10 protein interacts with MAD2, a component of the spindle checkpoint, and plays a role in antigen presentation, cytokine response, apoptosis and mitosis. It may also regulate cell growth during dendritic cell or B cell activation and development. FAT10 mRNA is expressed mainly in some dendritic cells and lymphoblastoid lines and in other specific cells subsequent to interferon- γ induction. The human FAT10 gene, designated UBD, maps to chromosome 6p22.1 and is overexpressed in the tumors of various epithelial cancers.

REFERENCES

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2. Bates, E.E., et al. 1997. Identification and analysis of a novel member of the ubiquitin family in dendritic cells and mature B cells. *Eur. J. Immunol.* 27: 2471-2477.
3. Liu, Y.C., et al. 1999. A MHC-encoded ubiquitin-like protein (FAT10) binds noncovalently to the spindle assembly checkpoint protein MAD2. *Proc. Natl. Acad. Sci. USA* 96: 4313-4318.
4. Online Mendelian Inheritance in Man, OMIM. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606050. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Hipp, M.S., et al. 2005. FAT10, a ubiquitin-independent signal for proteasomal degradation. *Mol. Cell. Biol.* 25: 3483-3491.
6. Zhang, D.W., et al. 2006. p53 negatively regulates the expression of FAT10, a gene upregulated in various cancers. *Oncogene* 25: 2318-2327.
7. Ross, M.J., et al. 2006. Role of ubiquitin-like protein FAT10 in epithelial apoptosis in renal disease. *J. Am. Soc. Nephrol.* 17: 996-1004.
8. Ren, J., et al. 2006. FAT10 plays a role in the regulation of chromosomal stability. *J. Biol. Chem.* 281: 11413-11421.
9. Lim, C.B., et al. 2006. FAT10, a gene upregulated in various cancers, is cell-cycle regulated. *Cell Div.* 1: 20.

CHROMOSOMAL LOCATION

Genetic locus: UBD (human) mapping to 6p22.1; Ubd (mouse) mapping to 17 B1.

SOURCE

FAT10 (T-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of FAT10 of human origin.

RESEARCH USE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-51086 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FAT10 (T-18) is recommended for detection of FAT10 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], 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).

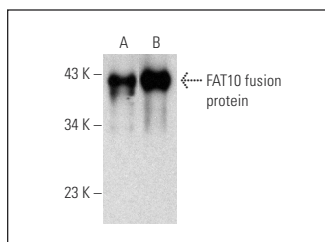
FAT10 (T-18) is also recommended for detection of FAT10 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for FAT10 siRNA (h): sc-60627, FAT10 siRNA (m): sc-60628, FAT10 shRNA Plasmid (h): sc-60627-SH, FAT10 shRNA Plasmid (m): sc-60628-SH, FAT10 shRNA (h) Lentiviral Particles: sc-60627-V and FAT10 shRNA (m) Lentiviral Particles: sc-60628-V.

Molecular Weight of FAT10: 18 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

DATA



FAT10 (T-18): sc-51086. Western blot analysis of human recombinant FAT10 (A) and mouse recombinant FAT10 (B) fusion proteins.

SELECT PRODUCT CITATIONS

1. Klopstock, N., et al. 2009. HCV tumor promoting effect is dependent on host genetic background. *PLoS ONE* 4: e5025.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

MONOS
Satisfaction
Guaranteed

Try **FAT10 (A-8): sc-393630** or **FAT10 (G-5): sc-133199**, our highly recommended monoclonal alternatives to FAT10 (T-18).