

KCMF1 (A-3): sc-390051

BACKGROUND

Zinc-finger proteins contain DNA-binding domains and have a wide variety of functions, most of which encompass some form of transcriptional activation or repression. KCMF1 (potassium channel modulatory factor 1), also known as FGF-induced ubiquitin-protein ligase in gastric cancers (FIGC), ZZ-type zinc finger-containing protein 1 (ZZZ1), differentially expressed in branching tubulogenesis 91 (DEBT91) or PCMF, is a 381 amino acid member of the KCMF1 family and consists of one C₂H₂-type zinc finger and one ZZ-type zinc finger. KCMF1 is expressed in spleen, small intestine, ovary, peripheral blood, lung, kidney and pancreas with low expression in the thymus, prostate, testis, colon, heart, brain, placenta and liver. KCMF1 has intrinsic E3 ubiquitin ligase activity and promotes ubiquitination. KCMF1 is upregulated by basic fibroblast growth factor (also designated FGF-2) in gastric cancer cells and is considered a novel gene important in the regulation of epithelial morphogenesis.

REFERENCES

1. South, T.L. and Summers, M.F. 1990. Zinc fingers. *Adv. Inorg. Biochem.* 8: 199-248.
2. Thiesen, H.J. 1990. Multiple genes encoding zinc finger domains are expressed in human T cells. *New Biol.* 2: 363-374.
3. Wolfe, D., et al. 1999. Ubiquitin metabolism affects cellular response to volatile anesthetics in yeast. *Mol. Cell. Biol.* 19: 8254-8262.
4. Li, Z., et al. 2003. Debt91, a putative zinc finger protein differentially expressed during epithelial morphogenesis. *Biochem. Biophys. Res. Commun.* 306: 623-628.

CHROMOSOMAL LOCATION

Genetic locus: KCMF1 (human) mapping to 2p11.2; Kcmf1 (mouse) mapping to 6 C1.

SOURCE

KCMF1 (A-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 59-81 within an internal region of KCMF1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

KCMF1 (A-3) is available conjugated to agarose (sc-390051 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390051 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390051 PE), fluorescein (sc-390051 FITC), Alexa Fluor[®] 488 (sc-390051 AF488), Alexa Fluor[®] 546 (sc-390051 AF546), Alexa Fluor[®] 594 (sc-390051 AF594) or Alexa Fluor[®] 647 (sc-390051 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-390051 AF680) or Alexa Fluor[®] 790 (sc-390051 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390051 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

KCMF1 (A-3) is recommended for detection of KCMF1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

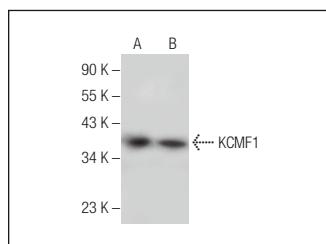
KCMF1 (A-3) is also recommended for detection of KCMF1 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for KCMF1 siRNA (h): sc-94339, KCMF1 siRNA (m): sc-146355, KCMF1 shRNA Plasmid (h): sc-94339-SH, KCMF1 shRNA Plasmid (m): sc-146355-SH, KCMF1 shRNA (h) Lentiviral Particles: sc-94339-V and KCMF1 shRNA (m) Lentiviral Particles: sc-146355-V.

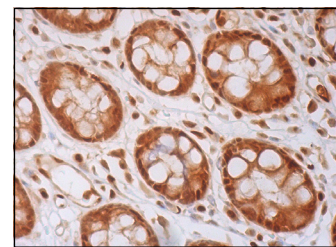
Molecular Weight of KCMF1: 42 kDa.

Positive Controls: SW480 cell lysate: sc-2219 or WI-38 whole cell lysate: sc-364260.

DATA



KCMF1 (A-3): sc-390051. Western blot analysis of KCMF1 expression in WI-38 (A) and SW480 (B) whole cell lysates.



KCMF1 (A-3): sc-390051. Immunoperoxidase staining of formalin fixed, paraffin-embedded human colon tissue showing nuclear and cytoplasmic staining of glandular cells and endothelial cells.

SELECT PRODUCT CITATIONS

1. Singh, A., et al. 2023. Disruption in networking of KCMF1 linked ubiquitin ligase impairs autophagy in CD8⁺ memory T cells of patients with renal cell carcinoma. *Cancer Lett.* 564: 216194.

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 for detailed protocols and support products.

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