

KLF6 (2F5): sc-134374

BACKGROUND

The Krüppel zinc finger transcription factor was initially identified in *Drosophila* as a segmentation gene. The mammalian family of Krüppel-type zinc finger transcription factors comprise a conserved family of DNA-binding proteins that are important in developmental regulation. The Krüppel-like factor 6 (KLF6) protein is a nuclear DNA-binding protein. KLF6 reduces cell proliferation by upregulating p21 in a p53-independent manner. KLF6 is also known as transcription factor ZF9, B cell derived 1 (BCD1), and core promoter element-binding protein (COPEB). KLF6 is predominantly expressed in the placenta but is also present in spleen, thymus, prostate, testis, small intestine and colon. In placenta, KLF6, KLF4 and pregnancy glycoprotein are co-expressed in the same cell types of placenta villi and membranes. The gene encoding human KLF6 maps to chromosome 10p15.1, and it is mutated in a subset of human prostate cancer.

REFERENCES

- Schuh, R., et al. 1986. A conserved family of nuclear proteins containing structural elements of the finger protein encoded by Krüppel, a *Drosophila* segmentation gene. *Cell* 47: 1025-1032.
- Ollo, R., et al. 1987. *Drosophila* Krüppel gene product produced in a baculovirus expression system is a nuclear phosphoprotein that binds to DNA. *Proc. Natl. Acad. Sci. USA* 84: 5700-5704.
- Ruppert, J.M., et al. 1988. The GLI-Krüppel family of human genes. *Mol. Cell. Biol.* 8: 3104-3113.
- Anderson, K.P., et al. 1995. Isolation of a gene encoding a functional zinc-finger protein homologous to erythroid Krüppel-like factor: identification of a new multigene family. *Mol. Cell. Biol.* 15: 5957-5965.

CHROMOSOMAL LOCATION

Genetic locus: KLF6 (human) mapping to 10p15.1.

SOURCE

KLF6 (2F5) is a mouse monoclonal antibody raised against recombinant KLF6 protein of human origin.

PRODUCT

Each vial contains 100 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

KLF6 (2F5) is recommended for detection of KLF6 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

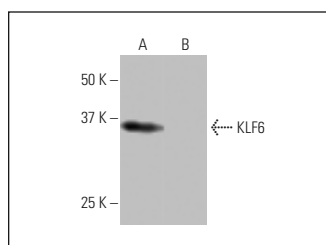
Suitable for use as control antibody for KLF6 siRNA (h): sc-38021, KLF6 shRNA Plasmid (h): sc-38021-SH and KLF6 shRNA (h) Lentiviral Particles: sc-38021-V.

Positive Controls: human KLF6 transfected 293T whole cell lysate.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

DATA



KLF6 (2F5): sc-134374. Western blot analysis of KLF6 expression in human KLF6 transfected (A) and non-transfected (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Ebert, R., et al. 2012. Krüppel-like factors KLF2 and 6 and Ki-67 are direct targets of zoledronic acid in MCF-7 cells. *Bone* 50: 723-732.
- Liu, X., et al. 2012. KLF6 loss of function in human prostate cancer progression is implicated in resistance to androgen deprivation. *Am. J. Pathol.* 181: 1007-1016.
- Yang, F., et al. 2018. MicroRNA-543 promotes the proliferation and invasion of clear cell renal cell carcinoma cells by targeting Krüppel-like factor 6. *Biomed. Pharmacother.* 97: 616-623.
- Luo, D., et al. 2019. MicroRNA-18b acts as an oncogene in gastric cancer by directly targeting Krüppel-like factor 6. *Mol. Med. Rep.* 19: 1926-1934.
- Wang, Z., et al. 2020. Hypermethylation of miR-181b in monocytes is associated with coronary artery disease and promotes M1 polarized phenotype via PIAS1-KLF4 axis. *Cardiovasc. Diagn. Ther.* 10: 738-751.

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.



See **KLF6 (E-10): sc-365633** for KLF6 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.