

KLF4 Antibody

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For Research Use Only. Not For Use In Diagnostic Procedures.

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Endogenous	H, M, Mk	65 kDa	Rabbit**

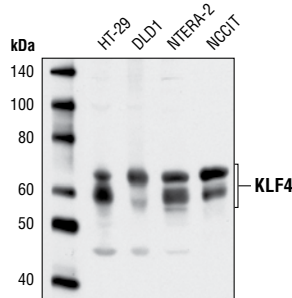
Background: KLF4 is a member of the erythroid Kruppel-like factor (EKLF) multigene family that is highly expressed in the differentiating layers of the epidermis (1, 2). KLF4 plays a critical role in the differentiation of epithelial cells and is essential for normal gastric homeostasis (2,3). Depending on target gene, KLF4 can function as both a repressor and activator of transcription (4). Up-regulated in human squamous cell carcinoma of the head and neck and down-regulated in colorectal carcinoma, this protein may function as either a tumor suppressor or an oncogene depending on tumor type (5,6). The *in vitro* reprogramming of somatic cells to an embryonic-like state has been achieved by retroviral transduction of four factors: Oct-3/4, Sox2, c-Myc, and KLF4 (7). These induced, pluripotent stem cells (iPS) are of great therapeutic interest as they exhibit the key characteristics and growth properties of pluripotent stem cells (8,9).

Specificity/Sensitivity: KLF4 Antibody detects endogenous levels of total KLF4 protein.

Source/Purification: Polyclonal antibodies are produced by immunizing animals with synthetic peptide corresponding to amino acid sequence at the amino terminus of human KLF4. Antibodies are purified by Protein A and peptide affinity chromatography.

Background References:

- (1) Yet, S.F. et al. (1998) *J Biol Chem* 273, 1026–31.
- (2) Segre, J.A. et al. (1999) *Nat Genet* 22, 356–60.
- (3) Katz, J.P. et al. (2005) *Gastroenterology* 128, 935–45.
- (4) Evans, P.M. and Liu, C. (2008) *Acta Biochim Biophys Sin (Shanghai)* 40, 554–64.
- (5) Foster, K.W. et al. (2005) *Oncogene* 24, 1491–500.
- (6) Rowland, B.D. and Peeper, D.S. (2006) *Nat Rev Cancer* 6, 11–23.
- (7) Takahashi, K. and Yamanaka, S. (2006) *Cell* 126, 663–76.
- (8) Meissner, A. et al. (2007) *Nat Biotechnol* 25, 1177–81.
- (9) Park, I.H. et al. (2008) *Nature* 451, 141–6.



Western blot analysis of extracts from various cell lines using KLF4 antibody.

Entrez-Gene ID #9314

Swiss-Prot Acc. #043474

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting 1:1000

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide

Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine

Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse

All—all species expected

Species enclosed in parentheses are predicted to react based on 100% homology.