#12173 Store at -20°C

KLF4 (D1F2) Rabbit mAb

☑ 100 µl
(10 western blots)

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Entrez-Gene ID #9314
Swiss-Prot Acc. #043474

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP	H, (Mk)	62 kDa	Rabbit IgG**
Endogenous			

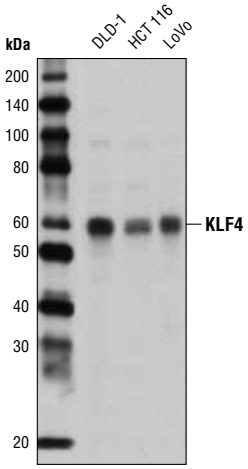
Background: KLF4 is a member of the erythroid Kruppel-like factor (EKLF) multigene family that is highly expressed in the differentiating layers of the epidermis (1, 2). KLF4 plays a critical role in the differentiation of epithelial cells and is essential for normal gastric homeostasis (2,3). Depending on the target gene, KLF4 can function as both a repressor and activator of transcription (4). Research studies suggest this protein may function as either a tumor suppressor or an oncogene depending on tumor type, with up-regulation in human squamous cell carcinoma of the head and neck and down-regulation in colorectal carcinoma (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 (D1F2) Rabbit mAb recognizes endogenous levels of total KLF4 protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human KLF protein.

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 (D1F2) Rabbit mAb.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. 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
Immunoprecipitation	1:100

For product 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 complementary 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.