

#12173 Store at -20°C

KLF4 (D1F2) Rabbit mAb**Cell Signaling**
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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP	H	Endogenous	62	Rabbit IgG	#O43474	9314

Product Usage Information**Application****Dilution**

Western Blotting

1:1000

Immunoprecipitation

1:100

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.

Specificity / Sensitivity

KLF4 (D1F2) Rabbit mAb recognizes endogenous levels of total KLF4 protein.

Species predicted to react based on 100% sequence homology:

Monkey

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

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).

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.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

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

Applications Key**WB:** Western Blotting **IP:** Immunoprecipitation**Cross-Reactivity Key**

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **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
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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