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#4038  
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## KLF4 Antibody

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	Endogenous	65	Rabbit	#O43474	9314

### Product Usage Information

#### Application

Western Blotting

#### Dilution

1:1000

### 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.

### 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 surrounding Pro92 of human KLF4. Antibodies are purified by Protein A and peptide affinity chromatography.

### 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

**W:** Western Blotting

### 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 **G:** Goat **All:** All Species Expected

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