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Store at -20C

#4038

KLF4 Antibody

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

Applications: W	Reactivity: H M Mk	Sensitivity: Endogenous	MW (kDa): 65	Source/Isotype: Rabbit	UniProt ID: #O43474	Entrez-Gene Id: 9314
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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 **Mk:** Monkey

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