

Store at -20C
#4038

KLF4 Antibody

**Cell Signaling**
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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H M Mk	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 at the amino terminus 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 <i>in vitro</i> 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	<ol style="list-style-type: none"> 1. Yet, S.F. et al. (1998) <i>J Biol Chem</i> 273, 1026-31. 2. Segre, J.A. et al. (1999) <i>Nat Genet</i> 22, 356-60. 3. Katz, J.P. et al. (2005) <i>Gastroenterology</i> 128, 935-45. 4. Evans, P.M. and Liu, C. (2008) <i>Acta Biochim Biophys Sin (Shanghai)</i> 40, 554-64. 5. Foster, K.W. et al. (2005) <i>Oncogene</i> 24, 1491-500. 6. Rowland, B.D. and Peeper, D.S. (2006) <i>Nat Rev Cancer</i> 6, 11-23. 7. Takahashi, K. and Yamanaka, S. (2006) <i>Cell</i> 126, 663-76. 8. Meissner, A. et al. (2007) <i>Nat Biotechnol</i> 25, 1177-81. 9. Park, I.H. et al. (2008) <i>Nature</i> 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
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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