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KLF4 Antibody [4G6E11]

Catalog # ASC12016

Product Information

Application	WB, E
Primary Accession	O43474
Other Accession	AAH30811, 21410813
Reactivity	Human, Mouse, Rat
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Clone Names	4G6E11
Calculated MW	54671
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	KLF4 antibody can be used for detection of KLF4 by Western blot at 1 □g/mL.

Additional Information

Gene ID	9314
Other Names	Krueppel-like factor 4, Epithelial zinc finger protein EZF, Gut-enriched krueppel-like factor, KLF4, EZF, GKLF
Target/Specificity	KLF4; At least three isoforms of KLF4 are known to exist; this antibody will detect all three. KLF4 antibody will not cross-react with other Kruppel-like family members.
Reconstitution & Storage	KLF4 monoclonal antibody can be stored at -20℃, stable for one year.
Precautions	KLF4 Antibody [4G6E11] is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	KLF4 (HGNC:6348)
Synonyms	EZF, GKLF
Function	Transcription factor; can act both as activator and as repressor. Binds the 5'-CACCC-3' core sequence. Binds to the promoter region of its own gene and can activate its own transcription. Regulates the expression of key transcription factors during embryonic development. Plays an important role in maintaining embryonic stem cells, and in preventing their differentiation. Required for establishing the barrier function of the skin and for postnatal maturation and maintenance of the ocular surface. Involved in the differentiation of epithelial cells and may also function in skeletal and kidney development. Contributes to the down-regulation of p53/TP53 transcription.

Cellular Location	Nucleus {ECO:0000250|UniProtKB:Q60793}. Cytoplasm {ECO:0000250|UniProtKB:Q60793}

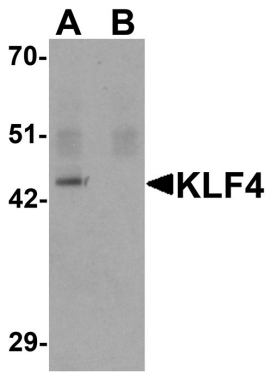
Background

KLF4 Monoclonal Antibody: KLF4 is a transcription factor that functions as both a transcriptional activator and repressor to regulate proliferation and differentiation of multiple cell types. The role of KLF4 in embryonic development suggested that it might be useful in the creation of stem cells that might be useful in cell replacement therapies in the treatment of several degenerative diseases. Artificial stem cells, termed induced pluripotent stem (iPS) cells, can be created by expressing KLF4 and the transcription factors POU5F1, Sox2, and Lin28 along with c-Myc in mouse fibroblasts. More recently, experiments have demonstrated that iPS cells could be generated using expression plasmids expressing KLF4, Sox2, POU5F1 and c-Myc, eliminating the need for virus introduction, thereby addressing a safety concern for potential use of iPS cells in regenerative medicine. KLF4 interacts directly with POU5F1 and Sox2 in iPS and ES cells and activates the target gene NANOG.

References

Evans PM, Zhang W, Chen X, et al. Kruppel-like factor 4 is acetylated by p300 and regulates gene transcription via modulation of histone acetylation. J. Bio. Chem. 2007; 282:33994-4002.
Carpenter MK, Rosler E, and Rao MS. Characterization and differentiation of human embryonic stem cells. Cloning Stem Cells 2003; 5:79-88.
Takahashi K and Yamanaka S. Induction of pluripotent stem cells from mouse embryonic and adult fibroblast cultures by defined factors. Cell 2006; 1263:663-76.
Okita K, Nakagawa M, Hyenjong H, et al. Generation of mouse induced pluripotent stem cells without viral vectors. Science 2008; 322:949-53.

Images



Western blot analysis of KLF4 in mouse liver tissue lysate with KLF4 antibody at 1 µg/mL in (A) the absence and (B) the presence of blocking peptide.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.