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KLF4 Antibody

Catalog # ASC11066

Product Information

Application	WB, E, IHC-P
Primary Accession	O43474
Other Accession	AAH30811, 21410813
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
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 - 2 g/mL. Antibody can also be used for immunohistochemistry starting at 5 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;
Reconstitution & Storage	KLF4 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	KLF4 Antibody 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}

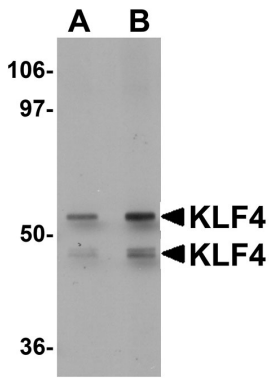
Background

KLF4 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.

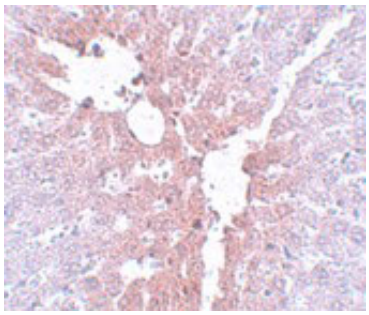
References

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 Cells2003; 5:79-88.
Takahashi K and Yamanaka S. Induction of pluripotent stem cells from mouse embryonic and adult fibroblast cultures by defined factors. Cell2006; 1263:663-76.
Okita K, Nakagawa M, Hyenjong H, et al. Generation of mouse induced pluripotent stem cells without viral vectors. Science2008; 322:949-53.

Images



Western blot analysis of KLF4 in human liver tissue lysate with KLF4 antibody at (A) 1 and (B) 2 µg/mL.



Immunohistochemistry of KLF4 in rat liver tissue with KLF4 antibody at 5 µg/mL.

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