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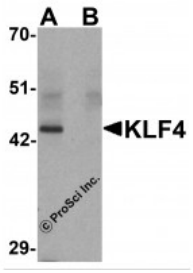
# KLF4 Antibody [4E5C3]

CATALOG NUMBER: PM-6142




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

## Specifications

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| **SPECIES REACTIVITY:** | Human, Mouse, Rat |
| **TESTED APPLICATIONS:** | ELISA, WB |
| **APPLICATIONS:** | KLF4 antibody can be used for detection of KLF4 by Western blot at 1 ug/mL. |
| **USER NOTE:** | Optimal dilutions for each application to be determined by the researcher. |
| **POSITIVE CONTROL:** | 1) Cat. No. 1404 - Mouse Liver Tissue Lysate |
| **SPECIFICITY:** | 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. |
| **IMMUNOGEN:** | KLF4 antibody was raised against a 20 amino acid synthetic peptide near the carboxy terminus of human KLF4. |
| **HOST SPECIES:** | Mouse |

## Properties

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| **PURIFICATION:** | KLF4 Monoclonal Antibody is affinity chromatography purified via peptide column. |
| **PHYSICAL STATE:** | Liquid |
| **BUFFER:** | KLF4 Monoclonal Antibody is supplied in PBS containing 0.02% sodium azide. |
| **CONCENTRATION:** | 1 mg/mL |
| **STORAGE CONDITIONS:** | KLF4 monoclonal antibody can be stored at -20˚C, stable for one year. |
| **CLONALITY:** | Monoclonal |
| **ISOTYPE:** | IgG1 |
| **CONJUGATE:** | Unconjugated |

## Additional Info

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| **ALTERNATE NAMES:** | KLF4 Antibody [4E5C3] : EZF, GKLF |
| **ACCESSION NO.:** | AAH30811 |
| **PROTEIN GI NO.:** | 21410813 |
| **OFFICIAL SYMBOL:** | KLF4 |

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|---|---|
| **GENE ID:** | 9314 |

## Background

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| **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:** | 1) 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. |
| | 2) Carpenter MK, Rosler E, and Rao MS. Characterization and differentiation of human embryonic stem cells. Cloning Stem Cells 2003; 5:79-88. |
| | 3) 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. |
| | 4) Okita K, Nakagawa M, Hyenjong H, et al. Generation of mouse induced pluripotent stem cells without viral vectors. Science 2008; 322:949-53. |

**FOR RESEARCH USE ONLY**

December 14, 2016