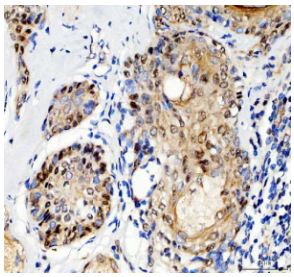
KLF4 Antibody / Stem Cell Transcription Factor Antibody (R31335)

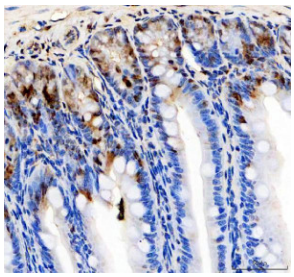
Catalog No.	Formulation	Size
R31335	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

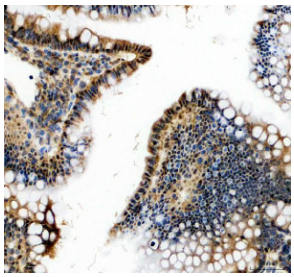
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	O43474
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml
Limitations	This KLF4 Antibody / Stem Cell Transcription Factor Antibody is available for research use only.



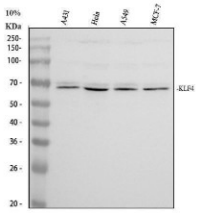
KLF4 Antibody Human Skin IHC. Immunohistochemical staining of FFPE human skin tissue using KLF4 antibody. Heat-induced epitope retrieval was performed in pH 8.0 EDTA buffer before incubation with KLF4 antibody at 2 ug/ml. An HRP-conjugated secondary antibody with DAB chromogen was used for visualization. Strong nuclear staining is observed in epithelial cells, with weaker cytoplasmic staining in surrounding cells, consistent with the role of KLF4 as a stem cell-associated transcription factor that regulates epithelial differentiation and tissue homeostasis. This KLF4 Antibody, also called Stem Cell Transcription Factor Antibody, is suitable for studies of pluripotency, cellular reprogramming, epithelial differentiation, transcriptional regulation, and cancer biology.



KLF4 Antibody Mouse Colon IHC. Immunohistochemical staining of FFPE mouse colon tissue using KLF4 antibody. Heat-induced epitope retrieval was performed in pH 8.0 EDTA buffer before incubation with KLF4 antibody at 2 ug/ml. An HRP-conjugated secondary antibody with DAB chromogen was used for visualization. Strong nuclear staining is observed in epithelial cells within the colonic crypts, with the highest immunoreactivity in differentiated luminal epithelial cells, consistent with the established role of KLF4 in epithelial differentiation and intestinal homeostasis. This KLF4 Antibody, also called Stem Cell Transcription Factor Antibody, is suitable for studies of pluripotency, cellular reprogramming, epithelial differentiation, transcriptional regulation, and cancer biology.



KLF4 Antibody Rat Colon IHC. Immunohistochemical staining of FFPE rat colon tissue using KLF4 antibody. Heat-induced epitope retrieval was performed in pH 8.0 EDTA buffer before incubation with KLF4 antibody at 2 ug/ml. An HRP-conjugated secondary antibody with DAB chromogen was used for visualization. Prominent nuclear staining is observed in epithelial cells lining the colonic mucosa, with strongest immunoreactivity in differentiated luminal epithelial cells, consistent with the established role of KLF4 in epithelial differentiation and intestinal homeostasis. This KLF4 Antibody, also called Stem Cell Transcription Factor Antibody, is suitable for studies of pluripotency, cellular reprogramming, epithelial differentiation, transcriptional regulation, and cancer biology.



KLF4 Antibody Human Cancer Cell WB. Western blot analysis of KLF4 expression in human cancer cell lines using KLF4 antibody. Lane 1: A431; Lane 2: HeLa; Lane 3: A549; Lane 4: MCF-7. Proteins were resolved on a 10% SDS-PAGE gel, transferred to nitrocellulose, and the membrane was incubated with KLF4 antibody at 0.5 ug/ml followed by an HRP-conjugated secondary antibody. A specific band was detected at the expected molecular weight of approximately 55 kDa in all cell lines examined. This KLF4 Antibody, also called Stem Cell Transcription Factor Antibody, is suitable for studies of pluripotency, cellular reprogramming, epithelial differentiation, transcriptional regulation, and cancer biology.

Description

KLF4 Antibody / Stem Cell Transcription Factor Antibody recognizes Kruppel-like factor 4 (KLF4), a zinc finger transcription factor that plays fundamental roles in stem cell maintenance, epithelial differentiation, cell cycle regulation, and tissue homeostasis. KLF4 binds GC-rich promoter elements through three C-terminal zinc finger domains to regulate genes controlling proliferation, differentiation, apoptosis, and cellular identity. Because KLF4 can function as either a transcriptional activator or repressor depending on cellular context, it serves as an important regulator of developmental and physiological processes. KLF4 Antibody is widely used to investigate stem cell biology, transcriptional regulation, and epithelial function.

KLF4 is highly expressed in differentiated epithelial tissues, including the skin and gastrointestinal tract, where it promotes terminal differentiation and maintenance of epithelial barrier integrity. The protein also contributes to vascular biology, immune regulation, and responses to cellular stress. One of KLF4's best-known functions is its role as one of the four Yamanaka transcription factors used to reprogram differentiated somatic cells into induced pluripotent stem cells. Through interactions with OCT4, SOX2, and c-MYC, KLF4 helps establish and maintain pluripotency while regulating self-renewal and lineage commitment.

Altered KLF4 expression has been associated with numerous human diseases, particularly cancer. Depending on tissue type and molecular context, KLF4 may function as either a tumor suppressor or an oncogene by regulating proliferation, differentiation, epithelial-to-mesenchymal transition, stemness, and therapeutic response. Dysregulated KLF4 signaling has also been linked to inflammatory disorders, cardiovascular disease, tissue regeneration, and wound healing. Consequently, KLF4 Antibody has become an important reagent for studies of cancer biology, regenerative medicine,

developmental biology, and cellular reprogramming.

KLF4 is commonly analyzed by Western blotting, immunohistochemistry, immunofluorescence, immunoprecipitation, flow cytometry, and chromatin-associated studies to evaluate protein expression, nuclear localization, and transcriptional activity. A KLF4 Antibody is a valuable research tool for investigating stem cell maintenance, pluripotency, epithelial differentiation, transcriptional regulation, cellular reprogramming, and cancer-associated signaling pathways.

Explore our Stem Cell Marker Antibodies page to discover additional antibodies for investigating pluripotency, cellular reprogramming, self-renewal, lineage commitment, and stem cell-associated transcriptional networks.

Application Notes

The stated application concentrations are suggested starting points. Titration of the KLF4 Antibody / Stem Cell Transcription Factor Antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

An amino acid sequence from the N-terminus of human KLF4 (RRETEEFNDLLDLDFI) was used as the immunogen for this KLF4 antibody (100% homologous in human, mouse and rat).

Storage

After reconstitution, the KLF4 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

KLF4 antibody, Stem Cell Transcription Factor antibody, EZF antibody, Gut-Enriched Krueppel-Like Factor antibody

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