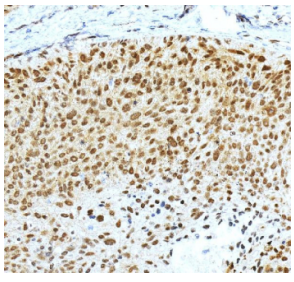
Krueppel-like Factor 4 Antibody / KLF4 Antibody (RQ6883)

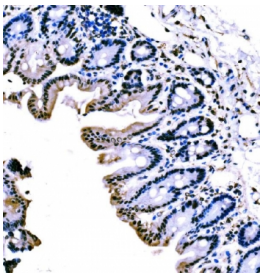
Catalog No.	Formulation	Size
RQ6883	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

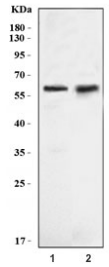
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	O43474
Localization	Nuclear
Applications	Western blot: 1-2ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Flow cytometry: 1-3ug/million cells Direct ELISA: 0.1-0.5ug/ml
Limitations	This Krueppel-like Factor 4 Antibody / KLF4 Antibody is available for research use only.



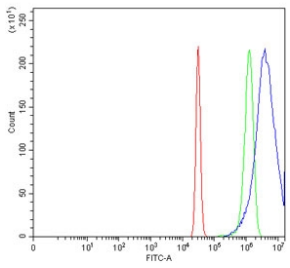
Krueppel-like Factor 4 Antibody Human Skin Cancer IHC. Immunohistochemical staining of FFPE human skin cancer tissue using Krueppel-like Factor 4 antibody. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 8.0 EDTA buffer for 20 minutes followed by cooling before incubation with the primary antibody. An HRP-conjugated secondary antibody with DAB chromogen was used for visualization. Tumor cells exhibit strong nuclear staining, consistent with the established role of Krueppel-like Factor 4 as a nuclear transcription factor regulating epithelial differentiation and cell fate. This Krueppel-like Factor 4 Antibody, also called KLF4 Antibody, is suitable for studies of epithelial differentiation, stem cell biology, pluripotency, transcriptional regulation, and cancer biology.



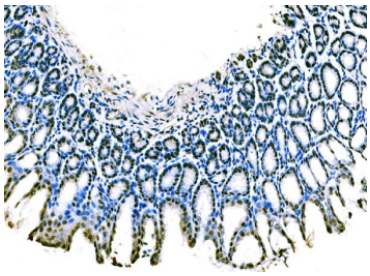
Krueppel-like Factor 4 Antibody Mouse Stomach IHC. Immunohistochemical staining of FFPE mouse stomach tissue using Krueppel-like Factor 4 antibody. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 8.0 EDTA buffer for 20 minutes followed by cooling before incubation with the primary antibody. An HRP-conjugated secondary antibody with DAB chromogen was used for visualization. Strong nuclear staining is observed in gastric epithelial cells, consistent with the established role of Krueppel-like Factor 4 in epithelial differentiation, tissue homeostasis, and maintenance of the gastrointestinal mucosa. This Krueppel-like Factor 4 Antibody, also called KLF4 Antibody, is suitable for studies of epithelial differentiation, stem cell biology, pluripotency, transcriptional regulation, and cancer biology.



Krueppel-like Factor 4 Antibody Human PC-3 and HeLa Cell WB. Western blot analysis of Krueppel-like Factor 4 expression in human cell lysates using Krueppel-like Factor 4 antibody. Lane 1: PC-3; Lane 2: HeLa. Proteins were separated by SDS-PAGE, transferred to a membrane, and probed with Krueppel-like Factor 4 antibody. A prominent immunoreactive band is detected within the expected molecular weight range of approximately 50â€“60 kDa in both cell lines. This Krueppel-like Factor 4 Antibody, also called KLF4 Antibody, is suitable for studies of epithelial differentiation, stem cell biology, pluripotency, transcriptional regulation, and cancer biology.



Krueppel-like Factor 4 Antibody HeLa Cell FACS. Flow cytometric analysis of fixed and permeabilized human HeLa cells using Krueppel-like Factor 4 antibody. Cells were incubated with Krueppel-like Factor 4 antibody at 1 ug/10^6 cells following goat serum blocking and detected with a fluorescent secondary antibody. The blue histogram (Krueppel-like Factor 4 antibody) shows a clear rightward shift relative to the isotype control (green) and unstained cells (red), demonstrating specific detection of endogenous KLF4 expression. This Krueppel-like Factor 4 Antibody, also called KLF4 Antibody, is suitable for studies of epithelial differentiation, stem cell biology, pluripotency, transcriptional regulation, and cancer biology.



Krueppel-like Factor 4 Antibody Rat Stomach IHC. Immunohistochemical staining of FFPE rat stomach tissue using Krueppel-like Factor 4 antibody. Heat-induced epitope retrieval was performed by boiling tissue sections in pH 8.0 EDTA buffer for 20 minutes followed by cooling before incubation with the primary antibody. An HRP-conjugated secondary antibody with DAB chromogen was used for visualization. Strong nuclear staining is observed in gastric epithelial cells, particularly within the glandular epithelium, consistent with the established role of Krueppel-like Factor 4 in epithelial differentiation, tissue homeostasis, and maintenance of the gastrointestinal mucosa. This Krueppel-like Factor 4 Antibody, also called KLF4 Antibody, is suitable for studies of epithelial differentiation, stem cell biology, pluripotency, transcriptional regulation, and cancer biology.

Description

Krueppel-like Factor 4 Antibody / KLF4 Antibody recognizes KLF4, a zinc finger transcription factor that regulates epithelial differentiation, stem cell maintenance, proliferation, and cellular homeostasis. Encoded by the KLF4 gene, this transcription factor binds GC-rich DNA sequences to activate or repress target genes involved in cell cycle progression, differentiation, apoptosis, and tissue development. Through context-dependent transcriptional regulation, KLF4 helps coordinate the balance between self-renewal and differentiation in numerous tissues. Krueppel-like Factor 4 Antibody is widely used to investigate transcriptional control and epithelial biology.

KLF4 is highly expressed in stratified epithelia and the gastrointestinal tract, where it promotes terminal differentiation and maintains tissue integrity. The protein also contributes to vascular biology, immune regulation, and responses to cellular stress. In stem cell research, KLF4 is recognized as one of the four Yamanaka factors capable of reprogramming

differentiated somatic cells into induced pluripotent stem cells alongside OCT4, SOX2, and c-MYC. These functions have made KLF4 an important model for understanding developmental plasticity, lineage specification, and regenerative medicine.

Abnormal KLF4 expression has been reported in numerous malignancies, including colorectal, breast, gastric, skin, and head and neck cancers. Depending on cellular context, KLF4 can exhibit tumor suppressive or oncogenic properties by influencing proliferation, epithelial-to-mesenchymal transition, stemness, differentiation, and therapeutic response. Beyond oncology, altered KLF4 activity has been implicated in inflammatory disorders, cardiovascular disease, wound healing, and tissue regeneration. Krueppel-like Factor 4 Antibody is therefore valuable for investigations into developmental biology, cancer progression, and regenerative medicine.

KLF4 is routinely analyzed by Western blotting, immunohistochemistry, immunofluorescence, immunoprecipitation, flow cytometry, and chromatin-associated assays to examine protein expression, nuclear localization, and transcriptional regulation. A Krueppel-like Factor 4 Antibody is an important research tool for investigating epithelial differentiation, stem cell biology, pluripotency, transcriptional regulation, and cellular reprogramming.

Learn more about KLF4 biology and its role as a stem cell-associated transcription factor by visiting our KLF4 Antibody / Stem Cell Transcription Factor Antibody page.

Application Notes

Optimal dilution of the Krueppel-like Factor 4 Antibody / KLF4 Antibody should be determined by the researcher.

Immunogen

Recombinant human protein (amino acids M1-H389) was used as the immunogen for the Krueppel-like factor 4 antibody.

Storage

After reconstitution, the Krueppel-like factor 4 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

Krueppel-like Factor 4 antibody, KLF4 antibody, Gut-Enriched Krueppel-Like Factor antibody, EZF antibody

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