

KLF4 antibody

Cat # KLF411-A

Rabbit Anti-Mouse Krueppel-like factor 4 antibody

SIZE: 100 µg

Krueppel-like factor 4 (KLF4), which is also known as epithelial zinc finger protein (EZF) and gut-enriched krueppel-like factor (GKLF), is a developmentally regulated transcription factor that plays an important role in maintaining the pluripotent state in embryonic stem cells (ESCs) and is used as a marker of the pluripotent state for cells in culture. KLF4 can act both as an activator and as a repressor. KLF4 binds to the 5'-CACCC-3' core sequence and binds to the promoter region of its own gene and it can activate its own transcription.

KLF4 has three C2H2-zinc fingers at its carboxyl terminus that are closely related to another KLF, KLF2. It has two nuclear localization sequences that signals it to localize to the nucleus. It is required for the differentiation of epithelial cells and the establishment of the barrier function of the skin, and KLF4 is also expressed during skeletal and kidney development. KLF4 is highly expressed in the skin, lung, and intestine along the epithelial border. This nuclear localized protein can act as both a tumor suppressor and activator depending upon its environment, but its most prominent function is growth suppression. Diseases associated with KLF4 include skin squamous cell carcinoma and familial adenomatous polyposis.

Source of Antigen or Antibodies

Uniprot: Q60793

Host: Rabbit

Clonality: Polyclonal

Purification: Ammonium sulfate followed by peptide affinity purification.

Immunogen: Mix of 2 synthetic peptides derived from Mouse KLF4 within region 350-to 483.

Species reactivity: Mouse and Human

Cross reactivity: The peptide used as an immunogen exhibits 100% homology Bovine, Goat, Cat, Horse, Human, Non-Human Primates, Xenopus Laevis, Rat, Sheep, and Zebrafish.

Subcellular Location: Nucleus

Alternative names: Krueppel-like factor 4, Epithelial zinc finger protein EZF, Gut-enriched krueppel-like factor

Recommended Secondary Antibody: Goat anti-Rabbit IgG-HRP (ADI cat#20320)

Form & Storage of Antibodies

Affinity pure IgG Solution

Concentration: 0.5 mg/ml Volume: 200 µl
Supplied in PBS, pH 7.4 + 0.1% BSA
The antibody can be made available carrier free or conjugated to HRP, Biotin, or FITC on request

Lyophilized powder

Reconstitute powder in 200 µl distilled water to 0.5 mg/ml

Storage:

Short-term: 4°C for 1 month

Long-term: at -20°C or below in suitable aliquots after reconstitution for 1 year. Do not expose to multiple freeze/thaw cycles or store working, diluted solutions. Glycerol may be added to a final concentration of 50% and antibodies can be stored un-aliquoted at -20°C.

Recommended Usage

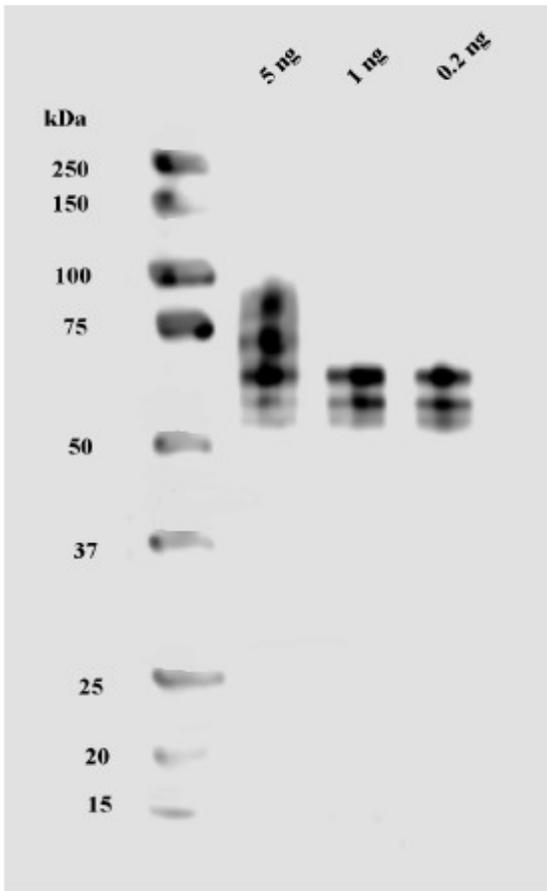
Western Blotting: 0.5-2.0 µg/ml
Expected band size: 63-65 kDa

The above concentrations are a *suggestion*, user's must optimize their assay based on their own conditions. The antibody may work in other applications such as Immunofluorescence. These methods have not been tested by ADI.

**This product is for In vitro research use only.*

Related materials available from ADI

Catalog#	Description
NANOG11-A	Rabbit anti-Human NANOG antibody
NANOG11-C	Recombinant NANOG protein control for Western blotting
OCT411-A	Rabbit anti-Mouse OCT4 antibody
OCT411-C	Recombinant OCT4 protein control for Western blotting
AB-21110	Mouse Monoclonal Anti-Human c-Myc IgG
MYC13-HRP	Rabbit Anti-c-Myc epitope (fusion tag) IgG-HRP conjugate
KLF411-A	1902026IA



Western Blotting: The antibody was validated with a recombinant HEK293 expressed Human KLF4-TAT protein (Peprtech cat#110-08). 5, 1, and 0.2 ng of the recombinant protein was heated for 5 minutes at 95°C then electrophoretically separated on a 10% SDS-PAGE gel. The gel was run for at 100V for ~1 hour and 30 minutes then transferred to a 0.2 μ m nitrocellulose membrane using the 'Mixed MW' settings on a Transblot Turbo (Biorad). The blot was blocked for 1 hour at room temperature with 1% Casein. **KLF411-A** was diluted with TBST+0.1% BSA to 1 μ g/ml and incubated overnight at 4°C. The blot was washed with TBS-T 3 times for 5 minutes each. Goat anti-rabbit IgG HRP (**ADI cat#20320**) was diluted in TBST+0.1% BSA at a 1:10,000 dilution (50 ng/ml) then incubated for 1 hour at room temperature. The blot was washed 3 times with TBS-T for 5 minutes each. The blot was then incubated with ADI Femto ECL substrate (**ADI cat#80210**) for 5 minutes and imaged on a CCD imaging system (C-DiGit, LI-COR).

Note: The recombinant protein is a truncated version of the full length protein containing a TAT tag. It migrates as approximately 72 and 66 kDa under reducing conditions due to post-translational modifications. Native protein will appear at ~62-65 kDa.