**Human KLF4 Antibody**

**Species Reactivity:** Human

**Specificity:** Detects human KLF4 in direct ELISAs and Western blots. In direct ELISAs, this antibody shows less than 30% cross-reactivity with recombinant mouse KLF4.

**Source:** Polyclonal Goat IgG

**Purification:** Antigen Affinity-purified

**Immunogen:** E. coli-derived recombinant human KLF4 Ala2-Phe470 Accession #: AAH29923

**Formulation:** Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

**Small pack size (SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.**

**APPLICATIONS**

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

<table>
<thead>
<tr>
<th>Application</th>
<th>Recommended Concentration</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western Blot</td>
<td>0.5 μg/mL</td>
<td>See Below</td>
</tr>
<tr>
<td>Chromatin Immunoprecipitation (ChIP)</td>
<td>5 μg/5 x 10⁶ cells</td>
<td>See Below</td>
</tr>
<tr>
<td>Immunocytochemistry</td>
<td>5-15 μg/mL</td>
<td>See Below</td>
</tr>
<tr>
<td>Immunohistochemistry</td>
<td>15 μg/mL</td>
<td>See Below</td>
</tr>
<tr>
<td>Simple Western</td>
<td>25 μg/mL</td>
<td>See Below</td>
</tr>
</tbody>
</table>

**DATA**

**Western Blot**

Detection of Human KLF4 by Western Blot. Western blot shows lysates of HT-29 human colon adenocarcinoma cell line, SW480 human colorectal adenocarcinoma cell line, and HCT-116 human colorectal carcinoma cell line. PVDF membrane was probed with 0.5 μg/mL of Goat Anti-Human KLF4 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3640) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog #: HAF109). A specific band was detected for KLF4 at approximately 60 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 5.

**Chromatin Immunoprecipitation (ChIP)**

Detection of KLF4-regulated Genes by Chromatin Immunoprecipitation. BG01V human embryonic stem cells were fixed using formaldehyde, resuspended in lysis buffer, and sonicated to shear chromatin. KLF4-DNA complexes were immunoprecipitated using 5 μg Goat Anti-Human KLF4 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3640) or control antibody (Catalog # AB-108-C) for 15 minutes in an ultrasonic bath, followed by Biotinylated Anti-Goat IgG Secondary Antibody (Catalog #: BAF100). Immunocomplexes were captured using 50 μL of MagCellect Streptavidin Ferrofluid (Catalog #: MAG999) and DNA was purified using chelating resin solution. The B2R promoter was detected by standard PCR.

**Immunocytochemistry**

KLF4 in BG01V Human Stem Cells. KLF4 was detected in immersion fixed BG01V human embryonic stem cells using 10 μg/mL Goat Anti-Human KLF4 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3640) for 3 hours at room temperature. Cells were stained with the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog #: NL001) and counterstained with DAPI (blue). View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

**Immunohistochemistry**

KLF4 in Human Colon. KLF4 was detected in immersion fixed paraffin-embedded sections of human colon using 15 μg/mL Goat Anti-Human KLF4 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3640) overnight at 4 °C. Tissue was stained with the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog #: CTS008) and counterstained with hematoxylin (blue). Specific labeling was localized to the nuclei of epithelial cells. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.
**Detection of Human KLF4 by Simple Western™**

Simple Western™ lane view shows lysates of HT-29 human colon adenocarcinoma cell line, loaded at 0.2 mg/mL. A specific band was detected for KLF4 at approximately 63 kDa (as indicated) using 25 µg/mL of Goat Anti-Human KLF4 Antigen Affinity-purified Polyclonal Antigen (Catalog # AF3640) followed by 1:50 dilution of HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system. Non-specific interaction with the 230 kDa Simple Western standard may be seen with this antibody.

---

**PREPARATION AND STORAGE**

**Reconstitution**
Reconstitute at 0.2 mg/mL in sterile PBS.

**Shipping**
The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
* Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C.

**Stability & Storage**
- Use a manual defrost freezer and avoid repeated freeze-thaw cycles.
- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 6 months, -20 to -70 °C under sterile conditions after reconstitution.

**BACKGROUND**

Human KLF4, also known as epithelial zinc finger protein (EZF), is a 53 kDa (470 aa) member of the kruppel C2H2-type zinc finger protein family. It contains three C2H2-type zinc fingers at the carboxyl terminus that preferentially bind to cis-DNA elements that are GC rich. KLF4 regulates the expression of target genes that are involved in different cellular functions. KLF4 is highly expressed in the epithelial cells of the skin and the gastrointestinal tract. Human and mouse KLF4 share 90% amino acid sequence identity.