

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Pref-1/DLK-1/FA1 in direct ELISAs and Western blots.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human Pref-1 long isoform Ala24-Pro297 with Arg248Pro and Lys295Ser substitutions Accession # AAA75364
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose.

## 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.

	Recommended Concentration	Sample
<b>Western Blot</b>	1 µg/mL	See Below
<b>Immunocytochemistry</b>	5-15 µg/mL	See Below

## DATA

**Western Blot**

**Detection of Human Pref-1/DLK1/FA1 by Western Blot.** Western blot shows lysates of human adrenal gland tissue and human placenta tissue. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human Pref-1/DLK1/FA1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1144) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for Pref-1/DLK1/FA1 at approximately 45-60 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

**Immunocytochemistry**

**Pref-1/DLK1/FA1 in HepG2 Human Cell Line.** Pref-1/DLK1/FA1 was detected in immersion fixed HepG2 human hepatocellular carcinoma cell line using Goat Anti-Human Pref-1/DLK1/FA1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1144) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<p>Use a manual frost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> <li>12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>6 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

## BACKGROUND

Pref-1 (Preadipocyte factor 1; also DLK-1 and FA1) is a 58-65 kDa member of the Notch/Serrata/Delta family of proteins. It is expressed in prechondrocytes and preadipocytes and appears to block progenitor cell differentiation into mature cell lineages. Mature human Pref-1 is a 360 amino acid (aa) type I transmembrane N- and O-linked glycoprotein. It contains a 280 aa extracellular region (aa 24-303), a 24 aa transmembrane segment (aa 304-327), and a 56 aa cytoplasmic domain (aa 328-383). The extracellular region contains six EGF-like domains, and undergoes proteolytic cleavage to generate a bioactive 50 kDa fragment, plus three 25-31 kDa fragments that show no activity. There are multiple potential splice variants. One shows a deletion of aa 229-301, a second possesses a six aa substitution for aa 1-52, a third shows a deletion of aa 210-277, while a fourth contains a six aa substitution for aa # 207-383. Over aa 24-297, human Pref-1 shares 82% aa identity with mouse Pref-1.