

## DESCRIPTION

<b>Species Reactivity</b>	Human/Mouse
<b>Specificity</b>	Detects endogenous human and mouse COX-4I1 in Western blots.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human COX4-I1 Ala23-Lys169 Accession # P13073
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

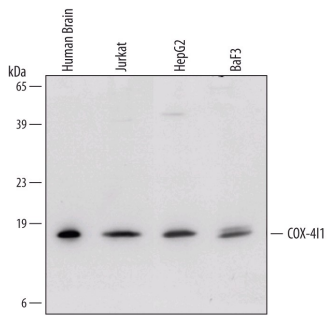
## APPLICATIONS

**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>Immunohistochemistry</b>	5-15 µg/mL	See Below

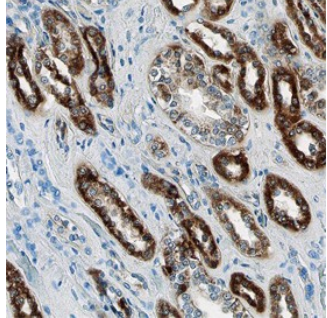
## DATA

**Western Blot**



**Detection of Human/Mouse COX4-I1 by Western Blot.** Western blot shows lysates of human brain tissue, Jurkat human acute T cell leukemia cell line, HepG2 human hepatocellular carcinoma cell line, and BaF3 mouse pro-B cell line. PVDF membrane was probed with 1 µg/mL of Human/Mouse COX4-I1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5814) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). A specific band was detected for COX4-I1 at approximately 18 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 2.

**Immunohistochemistry**



**COX4-I1 in Human Kidney.** COX4-I1 was detected in immersion fixed paraffin-embedded sections of normal human kidney using Human/Mouse COX4-I1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5814) at 10 µg/mL overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

## 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><b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b></p> <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month from date of receipt, 2 to 8 °C, reconstituted.</li> <li>● 6 months from date of receipt, -20 to -70 °C, reconstituted.</li> </ul>

## BACKGROUND

Cytochrome c oxidase subunit 4 isoform 1 (COX-4I1) is a 21-22 kDa member of the cytochrome c oxidase IV family of proteins. It is a component of COX, an inner mitochondrial membrane multimeric dimer that catalyzes the transfer of electrons from cytochrome c to dioxygen. COX-4I1 is the largest of 10 distinct nuclear DNA-encoded subunits that form each COX monomer. Human COX4-I1 is 169 amino acids (aa) in length and possesses a mitochondrial transit peptide between aa 1-22, an ATP binding site (aa 42; 95-100), and multiple subunit interface sequences. The ATP binding site is suggested to make COX-4I1 a regulatory subunit within the COX complex. There are two potential splice variants for COX-4I1 that show a three aa substitution for aa 81-169, and a single Gly substitution for aa 125-169. COX-4I2, the product of a different gene, shares only 50% aa identity with COX-4I1. Over amino acid 23-169, human COX4-I1 shares 78% aa identity with mouse COX-4I1.