

#### DESCRIPTION

|                                                                                                                                                                                                         |                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Human/Mouse                                                                             |
| <b>Specificity</b>                                                                                                                                                                                      | Detects 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<br>Ala23-Lys169<br>Accession # P13073 |
| <b>Conjugate</b>                                                                                                                                                                                        | Alexa Fluor 647<br>Excitation Wavelength: 650 nm<br>Emission Wavelength: 668 nm         |
| <b>Formulation</b>                                                                                                                                                                                      | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide                            |
| *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |                                                                                         |

#### 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.

|                             |                                                                        |
|-----------------------------|------------------------------------------------------------------------|
| <b>Western Blot</b>         | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunocytochemistry</b>  | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunohistochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |

#### PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

#### 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 COX4-1 shares 78% aa identity with mouse COX-4I1.

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