

## DESCRIPTION

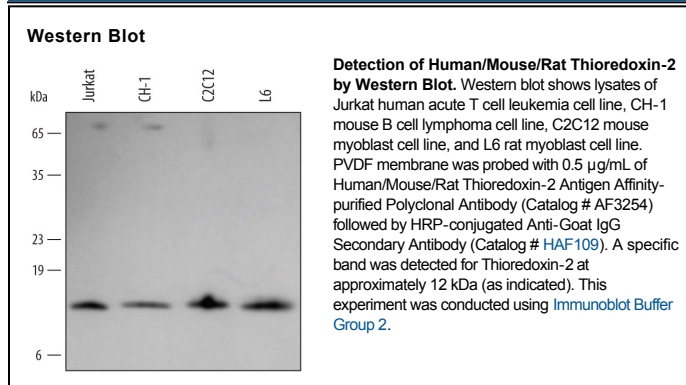
<b>Species Reactivity</b>	Human/Mouse/Rat
<b>Specificity</b>	Detects endogenous human, mouse and rat Thioredoxin 2 in Western blots.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant mouse Thioredoxin-2 Thr60-Gly166 Accession # P97493
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied 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.

	Recommended Concentration	Sample
<b>Western Blot</b>	0.5 µg/mL	See Below

## DATA



## 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. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <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

Thioredoxin-2 (Trx2), also known as mitochondrial Thioredoxin, belongs to the evolutionarily conserved Thioredoxin family. These proteins share the Thioredoxin fold containing the active site-CGPC motif. In their reduced form, the active site cysteine residues reduce protein disulfides. The resulting active site disulfide is subsequently reduced in a reaction catalyzed by a NADPH-dependent Thioredoxin reductase. Thioredoxin-2 contains an N-terminal 59 amino acid (aa) transit sequence that is cleaved upon translocation to mitochondria. The amino acid sequence of mature mouse Thioredoxin-2 is identical to mature rat Thioredoxin-2 and 98% identical to human Thioredoxin-2. Thioredoxin-2 interacts with specific components of the mitochondrial respiratory chain and helps regulate the membrane potential. Thioredoxin-2 is ubiquitously but variably expressed and high expression confers resistance to oxidant-induced apoptosis.