

## DESCRIPTION

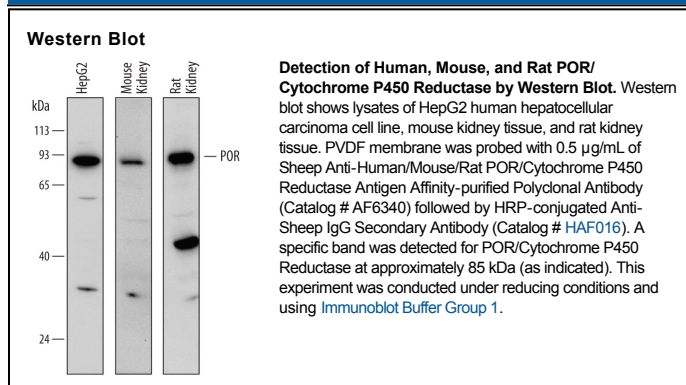
<b>Species Reactivity</b>	Human/Mouse/Rat
<b>Specificity</b>	Detects recombinant human POR/Cytochrome P450 Reductase in direct ELISAs and human, mouse, and rat POR/Cytochrome P450 Reductase in Western blots.
<b>Source</b>	Polyclonal Sheep IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived human POR/Cytochrome P450 Reductase Arg45-Ser677 Accession # P16435
<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>	Sterile PBS to a final concentration of 0.2 mg/mL.
<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

NADPH-Cytochrome P450 Reductase (P450R) is an essential component of the cytochrome P450 monooxygenase system of eukaryotic cells (1). P450R is anchored in the endoplasmic reticulum membrane with its catalytic domain residing in the cytosol. P450R is a flavoprotein, containing one molecule each of FMN and FAD, which are essential for the transfer of electrons from NADPH to the cytochromes P450 (2). This reduction is necessary for cytochromes P450 to perform each cycle of oxidation. P450R is also capable of transferring electrons to cytochrome b<sub>5</sub>, heme oxygenase, the fatty acid elongation system, and other proteins. Mutations of P450R can result in disordered steroidogenesis and Antley-Bixler syndrome.

### References:

1. Philips, A.H. and R.G. Langdon (1962) J. Biol. Chem. **237**:2652.
2. Iyanagi, T. and H.S. Mason (1973) Biochemistry **12**:2291.
3. Flueck C.E. *et al.* (2004) Nat. Genet. **36**:228.