

DESCRIPTION

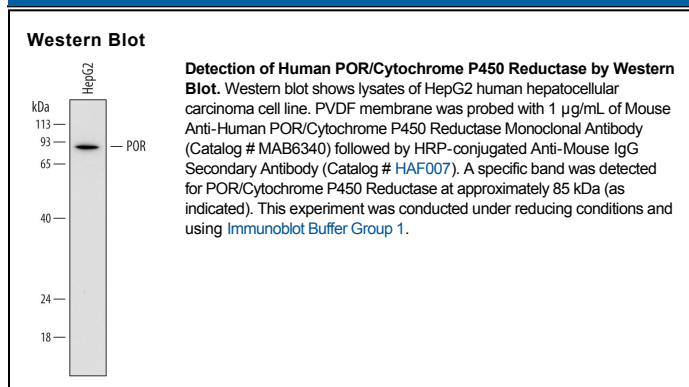
Species Reactivity	Human
Specificity	Detects human POR/Cytochrome P450 Reductase in direct ELISAs.
Source	Monoclonal Mouse IgG _{2B} Clone # 739613
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant human POR/Cytochrome P450 Reductase Arg45-Ser677 Accession # P16435
Formulation	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
Western Blot	1 µg/mL	See Below

DATA



PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	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
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

NADPH-Cytochrome P450 Reductase (POR, P450R) is an essential component of the cytochrome P450 monooxygenase system of eukaryotic cells (1). POR is anchored in the endoplasmic reticulum membrane with its catalytic domain residing in the cytosol. POR 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. POR is also capable of transferring electrons to cytochrome b₅, heme oxygenase, the fatty acid elongation system, and other proteins. Mutations of POR 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.