

DESCRIPTION

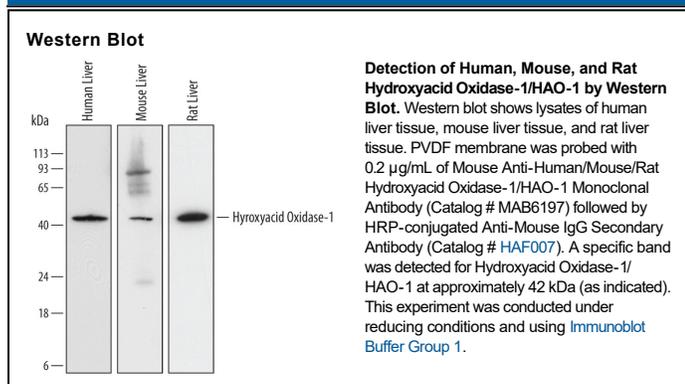
Species Reactivity	Human/Mouse/Rat
Specificity	Detects human Hydroxyacid Oxidase-1/HAO-1 in direct ELISAs and Western blots.
Source	Monoclonal Mouse IgG ₁ Clone # 732410
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human Hydroxyacid Oxidase-1/HAO-1 Leu2-Ile370 Accession # Q9UJM8
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 either lyophilized or 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	0.2 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

Glycolate oxidase is a member of the superfamily of the α -hydroxy acid oxidases (HAO), enzymes that are present in both plants and animals (1). It catalyzes the FMN-mediated oxidation of glycolate to glyoxylate and glyoxylate to oxalate with reduction of oxygen to hydrogen peroxide (2, 3). The co-factor, FMN, is tightly bound but not covalently linked to the protein. In humans and other vertebrates, HAOs are found primarily in the peroxisomes of liver, kidney, and pancreas. Three HAOs have been identified in humans (4). HAO-1 is most highly expressed in liver and pancreas and is most active on two-carbon substrates such as glycolate. HAO-2 is expressed in liver and kidney and has greater activity against long-chain α -hydroxy acid substrates such as 2-hydroxypalmitate. HAO-3 is expressed primarily in the pancreas. HAO contributes to hyperoxaluria, a disorder in which large deposits of calcium oxalate form kidney stones (5).

References:

1. Vignaud, C. *et al.* (2007) Arch. Biochem. Biophys. **465**:410.
2. Murray, M.S. *et al.* (2008) Biochemistry, **47**:2439.
3. Pennati, A. and G. Gadda. (2009) J. Biol. Chem. **284**:31214.
4. Jones, J.M. *et al.* (2000) J. Biol. Chem. **275**:12590.
5. Monico, G.C. *et al.* (2002) Kidney Int. **62**:392.