

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Aldehyde Oxidase 1/AOX1 in direct ELISAs and Western blots.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human Aldehyde Oxidase 1/AOX1 Asn302-Ser531 Accession # Q06278
<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.

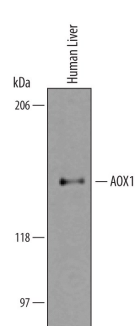
## APPLICATIONS

**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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	1 µg/mL	See Below
<b>Immunocytochemistry</b>	5-15 µg/mL	See Below
<b>Immunohistochemistry</b>	3-15 µg/mL	See Below

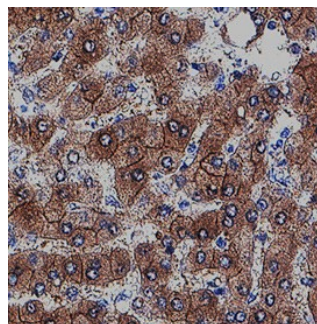
## DATA

### Western Blot



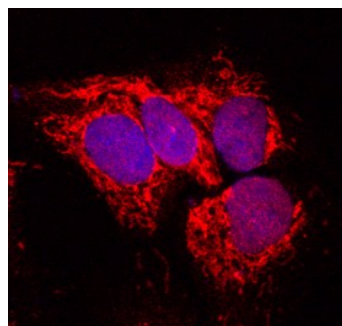
**Detection of Human Aldehyde Oxidase 1/AOX1 by Western Blot.** Western blot shows lysates of embryonic rat cortical neuron/glia cells. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human Aldehyde Oxidase 1/AOX1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5928) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF019). A specific band was detected for Aldehyde Oxidase 1/AOX1 at approximately 145 kDa (as indicated). This experiment was conducted under reducing conditions and using [Immunoblot Buffer Group 8](#).

### Immunohistochemistry



**Aldehyde Oxidase 1/AOX1 in Human Liver.** Aldehyde Oxidase 1/AOX1 was detected in immersion fixed paraffin-embedded sections of human liver using Goat Anti-Human Aldehyde Oxidase 1/AOX1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5928) at 3 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm of epithelial cells. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

### Immunocytochemistry



**Aldehyde Oxidase 1/AOX1 in HepG2 Human Cell Line.** Aldehyde Oxidase 1/AOX1 was detected in immersion fixed HepG2 human hepatocellular carcinoma cell line using Goat Anti-Human Aldehyde Oxidase 1/AOX1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF5928) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

## 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

AOX1 (Aldehyde oxidase 1; also AO and initially termed xanthine dehydrogenase/oxidase) is a 145-150 kDa member of the large molybdo-flavo family of enzymes. It is a homodimer widely expressed in cells such as hepatocytes, bronchial and intestinal epithelium and adrenal cortex. It is suggested to oxidize cyclic aldehydes to carboxylic acids and likely converts retinal to retinoic acid, gentistate aldehyde to gentisate and methylmalonate semialdehyde into methylmalonate. Human AOX1 is 1338 amino acids (aa) in length. It contains a 25 kDa N-terminal region that possesses two Fe/S redox centers (aa 5-162), a 40 kDa flavin-containing domain (aa 236-421), and an 85 kDa C-terminal region that contains a molybdenum cofactor and substrate-binding segment (aa 711-1245). One isoform shows a two aa substitution for aa 354-356. Over aa 302-531, human AOX1 shares 82% aa identity with mouse AOX1.