

## DESCRIPTION

<b>Species Reactivity</b>	Human/Mouse/Rat
<b>Specificity</b>	Detects human ALDH2 in direct ELISAs. Detects human, mouse, and rat ALDH2 in Western blots.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 1007902
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Synthetic peptide containing human ALDH2 Ser18-Ser517 Accession # P05091
<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 either lyophilized or as a 0.2 µm filtered solution in PBS.

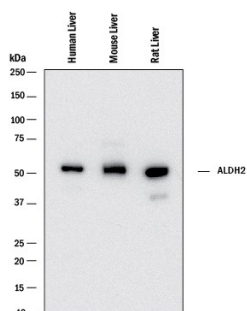
## APPLICATIONS

**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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	2 µg/mL	See Below
<b>Immunocytochemistry</b>	8-25 µg/mL	See Below
<b>Immunohistochemistry</b>	0.5-25 µg/mL	See Below
<b>Simple Western</b>	20 µg/mL	See Below

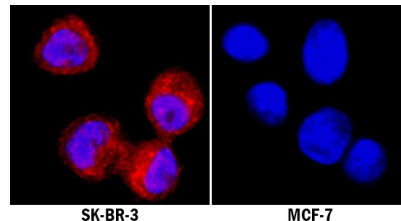
## DATA

### Western Blot



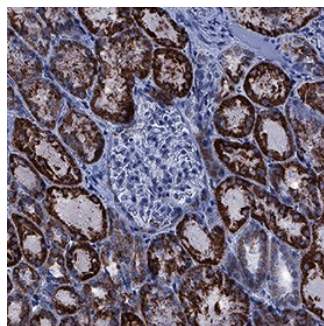
**Detection of Human, Mouse, and Rat ALDH2 by Western Blot.** Western blot shows lysates of human liver tissue, mouse liver tissue, and rat liver tissue. PVDF membrane was probed with 2 µg/mL of Mouse Anti-Human/Mouse/Rat ALDH2 Monoclonal Antibody (Catalog # MAB10168) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for ALDH2 at approximately 56 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

### Immunocytochemistry



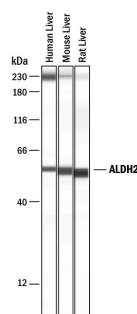
**ALDH2 in SK-BR-3 Human Cell Line.** ALDH2 was detected in immersion fixed SK-BR-3 human breast cancer cell line (positive staining) and MCF-7 human breast cancer cell line (negative staining) using Mouse Anti-Human/Mouse/Rat ALDH2 Monoclonal Antibody (Catalog # MAB10168) at 8 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Mouse IgG Secondary Antibody (red; Catalog # NL007) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

### Immunohistochemistry



**ALDH2 in Human Kidney.** ALDH2 was detected in immersion fixed paraffin-embedded sections of human kidney using Mouse Anti-Human/Mouse/Rat ALDH2 Monoclonal Antibody (Catalog # MAB10168) at 0.5 µg/mL for 1 hour at room temperature followed by incubation with the Anti-Mouse IgG VisUCyte™ HRP Polymer Antibody (Catalog # VC001). Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using DAB (brown) and counterstained with hematoxylin (blue). Specific staining was localized to cytoplasm. View our protocol for [IHC Staining with VisUCyte HRP Polymer Detection Reagents](#).

### Simple Western



**Detection of Human, Mouse, and Rat ALDH2 by Simple Western™.** Simple Western lane view shows lysates of human liver tissue, mouse liver tissue, and rat liver tissue, loaded at 0.2 mg/mL. A specific band was detected for ALDH2 at approximately 55 kDa (as indicated) using 20 µg/mL of Mouse Anti-Human/Mouse/Rat ALDH2 Monoclonal Antibody (Catalog # MAB10168). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.



## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.5 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

Aldehyde Dehydrogenase 2 (ALDH2) is a protein involved in the pathway which synthesizes acetate from ethanol. It also functions as a protector against oxidative stress. The ALDH2 isoform is localized to the mitochondrial matrix. Genetic variation in ALDH2 in the East Asian population is associated with high instances of acute alcohol intoxication.