**BACKGROUND**

Aldehyde dehydrogenases (ALDHs) mediate NADP+-dependent oxidation of aldehydes into acids during the detoxification of alcohol-derived acetaldehyde; metabolism of corticosteroids, biogenic amines and neurotransmitters; and lipid peroxidation. ALDH1A1, also designated retinal dehydrogenase 1 (Raldh1 or Raldh1), aldehyde dehydrogenase family 1 member A1, aldehyde dehydrogenase cytosolic, ALDH1, ALDH-E1 or ALDH E1, is a retinal dehydrogenase that participates in the biosynthesis of retinoic acid (RA). The major liver isoform ALDH1 localizes to cytosolic space, while ALDH2 localizes to the mitochondria. The ALDH1A2 (Raldh2, Raldh2-t) gene produces three different transcripts and also catalyzes the synthesis of RA from retinaldehyde; the mitochondrial isoform ALDH1 localizes to the mitochondria. The ALDH1A2 (RALDH2, RALDH2-T) gene produces three different transcripts and also catalyzes the synthesis of RA from retinaldehyde. ALDH2 is present in most Caucasians, yet is absent in 50% of Asians. The absence of this enzyme has been linked to alcohol intolerance and, thusly, a reduced risk for alcoholism-related liver disease.

**SOURCE**

ALDH1/2 (H-8) is a mouse monoclonal antibody raised against amino acids 186-270 mapping within an internal region of ALDH1A1 of human origin.

**PRODUCT**

Each vial contains 200 µg IgG2b kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ALDH1/2 (H-8) is available conjugated to agarose (sc-166362 AC), 500 µg/ml, sodium azide and 0.1% gelatin.

ALDH1/2 (H-8) is recommended for detection of ALDH1A1, ALDH1A2, ALDH1A3 and ALDH2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of ALDH1/2: 53 kDa.

Positive Controls: mouse liver extract: sc-2256, Hep G2 cell lysate: sc-2227 or AS49 cell lysate: sc-2413.

**APPLICATIONS**

ALDH1/2 (H-8) is recommended for detection of ALDH1A1, ALDH1A2, ALDH1A3 and ALDH2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of ALDH1/2: 53 kDa.

Positive Controls: mouse liver extract: sc-2256, Hep G2 cell lysate: sc-2227 or AS49 cell lysate: sc-2413.

**STORAGE**

Store at 4°C, **“DO NOT FREEZE”**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

**RESEARCH USE**

For research use only, not for use in diagnostic procedures.

**DATA**

ALDH1/2 (H-8): sc-166362. Near-infrared western blot analysis of ALDH1/2 expression in Hep G2 (A), AS49 (B) and Cali-1 (C) whole cell lysates and human skeletal muscle (D), mouse liver (E) and human brain (F) tissue extracts. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG BP-680: sc-516180.

ALDH1/2 (H-8): sc-166362. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing cytoplasmic staining of glandular cells (B).

**SELECT PRODUCT CITATIONS**


**PROTOCOLS**

See our website at www.scbt.com for detailed protocols and support products.