

Anti-ALDH1A2 Picoband Antibody

Catalog # ABO12666

Product Information

Application	WB
Primary Accession	O94788
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Retinal dehydrogenase 2(ALDH1A2) detection. Tested with WB in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	8854
Other Names	Retinal dehydrogenase 2, RALDH 2, RaLDH2, 1.2.1.36, Aldehyde dehydrogenase family 1 member A2, Retinaldehyde-specific dehydrogenase type 2, RALDH(II), ALDH1A2, RALDH2
Calculated MW	56724
Application Details	Western blot, 0.1-0.5 µg/ml, Mouse, Rat, Human
Subcellular Localization	Cytoplasm.
Source	Eukaryota
Protein Name	Retinal dehydrogenase 2
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	E.coli-derived human ALDH1A2 recombinant protein (Position: M1-A110). Human ALDH1A2 shares 95.5% amino acid (aa) sequence identity with both mouse and rat ALDH1A2.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins.
Storage	At -20° C for one year. After reconstitution, at 4° C for one month. It can also be aliquotted and stored frozen at -20° C for a longer time. Avoid repeated freezing and thawing.

Protein Information

Name ALDH1A2

Synonyms RALDH2

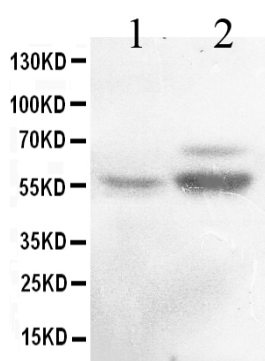
Function Catalyzes the NAD-dependent oxidation of aldehyde substrates, such as all-trans-retinal and all-trans-13,14-dihydroretinal, to their corresponding carboxylic acids, all-trans-retinoate and all-trans-13,14-dihydroretinoate, respectively (PubMed:[29240402](#), PubMed:[33565183](#)). Retinoate signaling is critical for the transcriptional control of many genes, for instance it is crucial for initiation of meiosis in both male and female (Probable) (PubMed:[33565183](#)). Recognizes retinal as substrate, both in its free form and when bound to cellular retinol-binding protein (By similarity). Can metabolize octanal and decanal, but has only very low activity with benzaldehyde, acetaldehyde and propanal (By similarity). Displays complete lack of activity with citral (By similarity).

Cellular Location Cytoplasm.

Background

Aldehyde dehydrogenase 1 family, member A2, also known as ALDH1A2 or retinaldehyde dehydrogenase 2 (RALDH2), is an enzyme that in humans is encoded by the ALDH1A2 gene. This protein belongs to the aldehyde dehydrogenase family of proteins. The product of this gene is an enzyme that catalyzes the synthesis of retinoic acid (RA) from retinaldehyde. Retinoic acid, the active derivative of vitamin A (retinol), is a hormonal signaling molecule that functions in developing and adult tissues. The studies of a similar mouse gene suggest that this enzyme and the cytochrome CYP26A1, concurrently establish local embryonic retinoic acid levels which facilitate posterior organ development and prevent spina bifida. Four transcript variants encoding distinct isoforms have been identified for this gene.

Images



Western blot analysis of ALDH1A2 expression in rat testis extract (lane 1) and mouse testis extract (lane 2).

ALDH1A2 at 55KD was detected using rabbit anti-ALDH1A2 Antigen Affinity purified polyclonal antibody (Catalog # ABO12666) at 0.5 µg/mL. The blot was developed using chemiluminescence (ECL) method.

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