SANTA CRUZ BIOTECHNOLOGY, INC.

Aldolase A (H-45): sc-30082

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Fructose 1,6-bisphosphate Aldolase catalyses the reversible condensation of glycerone-P and glyceraldehyde 3-phosphate into fructose 1,6-bisphosphate. Fructose 1,6-bisphosphate Aldolase exists as three forms, the muscle-specific Aldolase A, the liver-specific Aldolase B, and the brain-specific Aldolase C. Aldolase A, B, and C arose from a common ancestral gene, from which Aldolase B first diverged. Aldolase A is one of the most highly conserved enzymes known, with only about 2% of the residues changing per 100 million years. Aldolase B is regulated by the hormones Insulin and glucagon and has been implicated in hereditary fructose intolerance disease. Aldolase C is 36 kDa polypeptide that is exclusively expressed in Purkinje cells. Aldolase C-positive Purkinje cells are organized in the cerebellum as stripes or bands that run from anterior to posterior across the cerebellum and alternate with bands of Aldolase C-negative Purkinje cells.

REFERENCES

1. Izzo, P., et al. 1988. Human Aldolase A gene. Structural organization and tissue-specific expression by multiple promoters and alternate mRNA processing. Eur. J. Biochem. 174: 569-578.
2. Freemont, P.S., et al. 1988. The complete amino acid sequence of human skeletal-muscle fructose-bisphosphate Aldolase. Biochem. J. 249: 779-788.
3. Caffe, A.R., et al. 1994. Distribution of Purkinje cell-specific zebrin-II/Aldolase C immunoreactivity in the mouse, rat, rabbit, and human retina. J. Comp. Neurol. 348: 291-297.
4. Hawkes, R., et al. 1995. Aldolase C/ zebrin II and the regionalization of the cerebellum. J. Mol. Neurosci. 6: 147-158.
5. Lannoo, M.J., et al. 1997. A search for primitive Purkinje cells: zebrin II expression in sea lampreys (*Petromyzon marinus*). Neurosci. Lett. 237: 53-55.

CHROMOSOMAL LOCATION

Genetic locus: ALDOA (human) mapping to 16p11.2; Aldoa (mouse) mapping to 7 F3.

SOURCE

Aldolase A (H-45) is a rabbit polyclonal antibody raised against amino acids 320-364 mapping at the C-terminus of Aldolase A of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

Aldolase A (H-45) is recommended for detection of Aldolase A of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

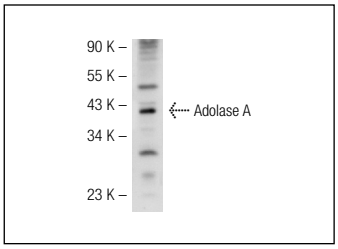
Aldolase A (H-45) is also recommended for detection of Aldolase A in additional species, including equine, canine and bovine.

Suitable for use as control antibody for Aldolase A siRNA (h): sc-29664, Aldolase A siRNA (m): sc-29665, Aldolase A shRNA Plasmid (h): sc-29664-SH, Aldolase A shRNA Plasmid (m): sc-29665-SH, Aldolase A shRNA (h) Lentiviral Particles: sc-29664-V and Aldolase A shRNA (m) Lentiviral Particles: sc-29665-V.

Molecular Weight of Aldolase A: 40 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, Sol8 cell lysate: sc-2249 or A673 cell lysate: sc-2414.

DATA



Aldolase A (H-45): sc-30082. Western blot analysis of Aldolase A expression in KNRK whole cell lysate.

SELECT PRODUCT CITATIONS

1. Valis, K., et al. 2008. VDAC2 and Aldolase A identified as membrane proteins of K562 cells with increased expression under iron deprivation. Mol. Cell. Biochem. 311: 225-231.
2. Smith, L., et al. 2009. Proteomic identification of putative biomarkers of radiotherapy resistance: a possible role for the 26S proteasome? Neoplasia 11: 1194-1207.

RESEARCH USE

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