SANTA CRUZ BIOTECHNOLOGY, INC.

Aldolase A (N-15): sc-12059

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 a 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.

CHROMOSOMAL LOCATION

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

SOURCE

Aldolase A (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-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.

Blocking peptide available for competition studies, sc-12059 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Aldolase A (N-15) 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 (N-15) 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: Aldolase A (h4): 293T Lysate: sc-113098, Caki-1 cell lysate: sc-2224 or KNRK whole cell lysate: sc-2214.

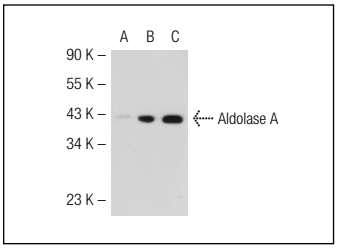
RESEARCH USE

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

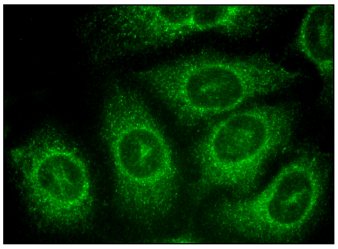
STORAGE

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

DATA



Aldolase A (N-15): sc-12059. Western blot analysis of Aldolase A expression in non-transfected 293T: sc-117752 (**A**), human Aldolase A transfected 293T: sc-113098 (**B**) and KNRK (**C**) whole cell lysates.



Aldolase A (N-15): sc-12059. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Lim, J.W., et al. 2002. Expression of Ku70 and Ku80 mediated by NFκB and cyclooxygenase-2 is related to proliferation of human gastric cancer cells. J. Biol. Chem. 277: 46093-46100.
2. Reynolds, J.L., et al. 2007. Proteomic analyses of methamphetamine (METH)-induced differential protein expression by immature dendritic cells (IDC). Biochim. Biophys. Acta 1774: 433-442.
3. Handa, Y., et al. 2007. Shigella IpgB1 promotes bacterial entry through the ELMO-Dock180 machinery. Nat. Cell Biol. 9: 121-128.
4. Lim, J.W., et al. 2008. NFκB p65 regulates nuclear translocation of Ku70 via degradation of heat shock cognate protein 70 in pancreatic acinar AR42J cells. Int. J. Biochem. Cell Biol. 40: 2065-2077.
5. Naryzhny, S.N. 2009. Blue dry western: simple, economic, informative, and fast way of immunodetection. Anal. Biochem. 392: 90-95.
6. Seo, J.Y., et al. 2009. Protective effect of lycopene on oxidative stress-induced cell death of pancreatic acinar cells. Ann. N.Y. Acad. Sci. 1171: 570-575.
7. Lee, J., et al. 2010. Membrane proteome analysis of cerulein-stimulated pancreatic acinar cells: implication for early event of acute pancreatitis. Gut Liver 4: 84-93.
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