

Aldolase C (N-14): sc-12065

BACKGROUND

Fructose 1,6-bisphosphate Aldolase catalyses the reversible condensation of glyceraldehyde 3-phosphate and dihydroxyacetone 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: ALDOC (human) mapping to 17q11.2; Aldoc (mouse) mapping to 11 B5.

SOURCE

Aldolase C (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Aldolase C 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-12065 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Aldolase C (N-14) is recommended for detection of Aldolase C 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 C (N-14) is also recommended for detection of Aldolase C in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Aldolase C siRNA (h): sc-29668, Aldolase C siRNA (m): sc-29669, Aldolase C shRNA Plasmid (h): sc-29668-SH, Aldolase C shRNA Plasmid (m): sc-29669-SH, Aldolase C shRNA (h) Lentiviral Particles: sc-29668-V and Aldolase C shRNA (m) Lentiviral Particles: sc-29669-V.

Molecular Weight of Aldolase C: 40 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, human brain hippocampus extract: sc-364375 or mouse brain extract: sc-2253.

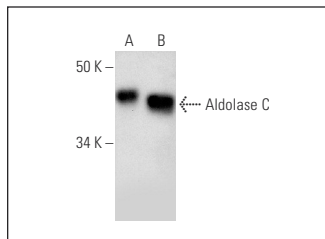
RESEARCH USE

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

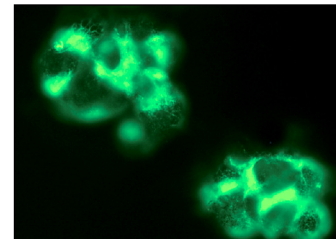
STORAGE

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

DATA



Aldolase C (N-14): sc-12065. Western blot analysis of Aldolase C expression in human hippocampus (A) and mouse brain (B) tissue extracts.



Aldolase C (N-14): sc-12065. Immunofluorescence staining of methanol-fixed IMR-32 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Matsuda, M., et al. 2003. Aldolase C/zebrin gene regulation by prolactin during pregnancy and lactation. *Endocrine* 20: 91-100.
2. Strom, A., et al. 2006. Identification of prion protein binding proteins by combined use of far-Western immunoblotting, two dimensional gel electrophoresis and mass spectrometry. *Proteomics* 6: 26-34.
3. Kántor, O., et al. 2007. Moderate loss of cerebellar Purkinje cells after chronic bilateral common carotid artery occlusion in rats. *Acta Neuropathol.* 113: 549-558.
4. Facello, B., et al. 2009. Glial cell line-derived neurotrophic factor in Purkinje cells of adult zebrafish: an autocrine mode of action? *Neurosci. Lett.* 465: 133-137.
5. Fisher, K.W., et al. 2011. Kinase suppressor of ras 1 (KSR1) regulates PGC1α and estrogen-related receptor α to promote oncogenic Ras-dependent anchorage-independent growth. *Mol. Cell. Biol.* 31: 2453-2461.
6. VanGuilder, H.D., et al. 2011. Hippocampal dysregulation of synaptic plasticity-associated proteins with age-related cognitive decline. *Neurobiol. Dis.* 43: 201-212.

PROTOCOLS

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

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Try **Aldolase C (H-11): sc-271593** or **Aldolase C (E-5): sc-374141**, our highly recommended monoclonal alternatives to Aldolase C (N-14).