SANTA CRUZ BIOTECHNOLOGY, INC.

Aldolase C (h): 293T Lysate: sc-112417

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.

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.
6. Walther, E.U., et al. 1998. Genomic sequences of Aldolase C (zebrin II) direct lacZ expression exclusively in non-neuronal cells of transgenic mice. Proc. Natl. Acad. Sci. USA 95: 2615-2620.
7. Dehnes, Y., et al. 1998. The glutamate transporter EAAT4 in rat cerebellar Purkinje cells: a glutamate-gated chloride channel concentrated near the synapse in parts of the dendritic membrane facing astroglia. J. Neurosci. 18: 3606-3619.

CHROMOSOMAL LOCATION

Genetic locus: ALDOC (human) mapping to 17q11.2.

PRODUCT

Aldolase C (h): 293T Lysate represents a lysate of human Aldolase C transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

Aldolase C (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Aldolase C antibodies. Recommended use: 10-20 µl per lane.

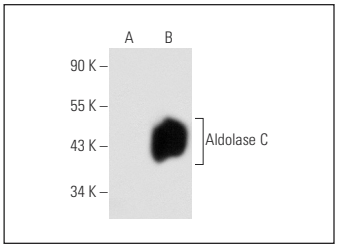
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Aldolase C (H-11): sc-271593 is recommended as a positive control antibody for Western Blot analysis of enhanced human Aldolase C expression in Aldolase C transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



Aldolase C (H-11): sc-271593. Western blot analysis of Aldolase C expression in non-transfected: sc-117752 (**A**) and human Aldolase C transfected: sc-112417 (**B**) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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