

zygin 2 (h): 293T Lysate: sc-112470

BACKGROUND

Zygin 2, also known as FEZ2 (fasciculation and elongation protein ζ 2), is a 353 amino acid cytoplasmic protein that belongs to the zygin family. Zygin 2 exists as a difulide-linked homodimer but may form heterodimers with zygin 1. Expressed in non-neural tissues including heart, lung, spleen, muscle, testis, placenta and melanocytes, zygin 2 may be involved in the outgrowth and fasciculation of axons. Existing as two alternatively spliced isoforms, the gene encoding zygin 2 maps to human chromosome 2p22.2 and mouse chromosome 17 E3. The genes encoding zygin 1 and 2 are evolutionarily conserved orthologs to the *C. elegans* gene, UNC-76. Zygin 2 is able to restore partial locomotion and axonal fasciculation to *C. elegans* UNC-76 mutants, which suggest a functional role in axonal outgrowth.

REFERENCES

1. Bloom, L. and Horvitz, H.R. 1997. The *Caenorhabditis elegans* gene *unc-76* and its human homologs define a new gene family involved in axonal outgrowth and fasciculation. *Proc. Natl. Acad. Sci. USA* 94: 3414-3419.
2. Fujita, T., Ikuta, J., Hamada, J., Okajima, T., Tatematsu, K., Tanizawa, K. and Kuroda, S. 2004. Identification of a tissue-non-specific homologue of axonal fasciculation and elongation protein ζ -1. *Biochem. Biophys. Res. Commun.* 313: 738-744.
3. Assmann, E.M., Alborghetti, M.R., Camargo, M.E. and Kobarg, J. 2006. FEZ1 dimerization and interaction with transcription regulatory proteins involves its coiled-coil region. *J. Biol. Chem.* 281: 9869-9881.
4. Alborghetti, M.R., Furlan, A.S., Silva, J.C., Paes Leme, A.F., Torriani, I.C. and Kobarg, J. 2010. Human FEZ1 protein forms a disulfide bond mediated dimer: implications for cargo transport. *J. Proteome Res.* 9: 4595-4603.
5. Alborghetti, M.R., Furlan, A.S. and Kobarg, J. 2011. FEZ2 has acquired additional protein interaction partners relative to FEZ1: functional and evolutionary implications. *PLoS ONE* 6: e17426.

CHROMOSOMAL LOCATION

Genetic locus: FEZ2 (human) mapping to 2p22.2.

PRODUCT

zygin 2 (h): 293T Lysate represents a lysate of human zygin 2 transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

RESEARCH USE

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

APPLICATIONS

zygin 2 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive zygin 2 antibodies. Recommended use: 10-20 μ l per lane.

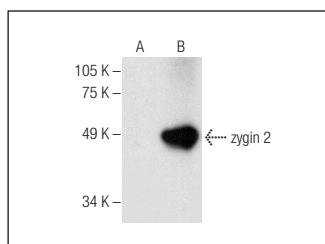
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

zygin 2 (F-3): sc-390111 is recommended as a positive control antibody for Western Blot analysis of enhanced human zygin 2 expression in zygin 2 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-IgG κ BP-HRP: sc-516102 or m-IgG κ 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



zygin 2 (F-3): sc-390111. Western blot analysis of zygin 2 expression in non-transfected: sc-117752 (A) and human zygin 2 transfected: sc-112470 (B) 293T whole cell lysates.

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.

PROTOCOLS

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