

zygin 2 (F-10): sc-377422

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 difluide-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., et al. 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., et al. 2006. FEZ1 dimerization and interaction with transcription regulatory proteins involves its coiled-coil region. *J. Biol. Chem.* 281: 9869-9881.
4. Alborghetti, M.R., et al. 2010. Human FEZ1 protein forms a disulfide bond mediated dimer: implications for cargo transport. *J. Proteome Res.* 9: 4595-4603.
5. Alborghetti, M.R., et al. 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; Fez2 (mouse) mapping to 17 E3.

SOURCE

zygin 2 (F-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 4-29 at the N-terminus of zygin 2 of human origin.

PRODUCT

Each vial contains 200 μ g IgG κ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-377422 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

zygin 2 (F-10) is recommended for detection of zygin 2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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).

zygin 2 (F-10) is also recommended for detection of zygin 2 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for zygin 2 siRNA (h): sc-94938, zygin 2 siRNA (m): sc-155855, zygin 2 shRNA Plasmid (h): sc-94938-SH, zygin 2 shRNA Plasmid (m): sc-155855-SH, zygin 2 shRNA (h) Lentiviral Particles: sc-94938-V and zygin 2 shRNA (m) Lentiviral Particles: sc-155855-V.

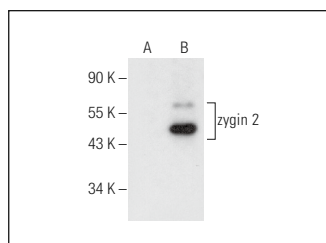
Molecular Weight of zygin 2: 40 kDa.

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

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



zygin 2 (F-10): sc-377422. 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.

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.