SANTA CRUZ BIOTECHNOLOGY, INC.

zygin 2 (F-10): sc-377422

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 difulfide-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 isforms, 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 µg IgG_1 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 µg 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 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).

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.

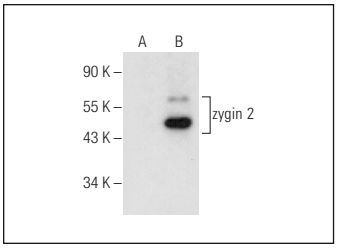
Molecular Weight of zygin 2: 40 kDa.

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-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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ 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.