

# zygin 2 (A-9): sc-514425

## BACKGROUND

Zygin 2, also known as FEZ2 (fasciculation and elongation protein  $\zeta$  2), is a 353 amino acid cytoplasmic protein that belongs to the zygin family. Zygin 2 exists as a disulfide-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

- 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.
- 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  $\zeta$ -1. *Biochem. Biophys. Res. Commun.* 313: 738-744.
- 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.
- 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.
- 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; Fez2 (mouse) mapping to 17 E3.

## SOURCE

zygin 2 (A-9) is a mouse monoclonal antibody raised against amino acids 1-40 mapping at the N-terminus of zygin 2 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## RESEARCH USE

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

## APPLICATIONS

zygin 2 (A-9) 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  $\mu$ g per 100-500  $\mu$ 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).

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.

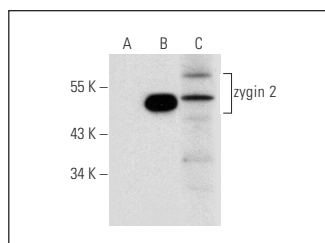
Molecular Weight of zygin 2: 40 kDa.

Positive Controls: zygin 2 (h): 293T Lysate: sc-112470, Hep G2 cell lysate: sc-2227 or HeLa whole cell lysate: sc-2200.

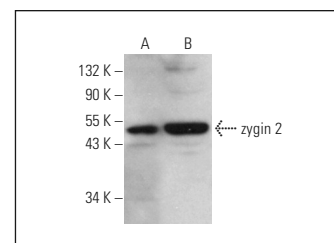
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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 (A-9): sc-514425. Western blot analysis of zygin 2 expression in non-transfected 293T: sc-117752 (A), human zygin 2 transfected 293T: sc-112470 (B) and HeLa (C) whole cell lysates.



zygin 2 (A-9): sc-514425. Western blot analysis of zygin 2 expression in Hep G2 (A) and KNRK (B) whole cell lysates.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.