SANTA CRUZ BIOTECHNOLOGY, INC.

Espin (m): 293T Lysate: sc-125310

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The Power to Question

BACKGROUND

Espin (ESPN), also known as autosomal recessive deafness type 36 protein (DFNB36), is an 854 amino acid cytoplasmic protein that contains 9 ANK repeats and one WH2 domain. The WH2 domain of Espin binds Actin monomers and mediates the assembly of the Actin bundle. This interaction plays a major role in the moderation of the organization, dynamics and signaling capacities of the Actin filament-rich specializations that regulate sensory transduction in various sensory cells. Defects in Espin are the cause of non-syndromic sensorineural deafness autosomal recessive type 36 (DFNB36), a sensorineural hearing loss caused by damage to the neural receptors of the inner ear, the nerve pathways to the brain or the region of the brain responsible for sound. Espin is expressed as two isoforms produced by alternative splicing and has been found to interact with IRSp53 and Profilin-2. In rodents, four major isoforms ranging from approximately 110 to 25 kDa have been identified with additional splice variants possible.

REFERENCES

1. Bartles, J.R., Wierda, A. and Zheng, L. 1996. Identification and characterization of Espin, an Actin-binding protein localized to the F-Actin-rich junctional plaques of Sertoli cell ectoplasmic specializations. J. Cell Sci. 109: 1229-1239.
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3. Naz, S., Griffith, A.J., Riazuddin, S., Hampton, L.L., Battey, J.F., Khan, S.N., Riazuddin, S., Wilcox, E.R. and Friedman, T.B. 2004. Mutations of ESPN cause autosomal recessive deafness and vestibular dysfunction. J. Med. Genet. 41: 591-595.
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5. Donaudy, F., Zheng, L., Ficarella, R., Ballana, E., Carella, M., Melchionda, S., Estivill, X., Bartles, J.R. and Gasparini, P. 2006. Espin gene (ESPN) mutations associated with autosomal dominant hearing loss cause defects in microvillar elongation or organisation. J. Med. Genet. 43: 157-161.
6. Primiani, N., Gregory, M., Dufresne, J., Smith, C.E., Liu, Y.L., Bartles, J.R., Cyr, D.G. and Hermo, L. 2007. Microvillar size and Espin expression in principal cells of the adult rat epididymis are regulated by androgens. J. Androl. 28: 659-669.

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.

CHROMOSOMAL LOCATION

Genetic locus: Espn (mouse) mapping to 4 E2.

PRODUCT

Espin (m): 293T Lysate represents a lysate of mouse Espin transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

Espin (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Espin antibodies. Recommended use: 10-20 µl per lane.

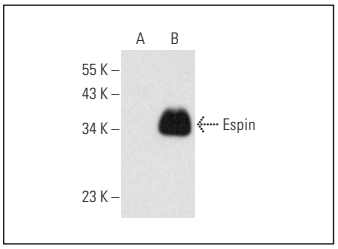
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Espin (E-1): sc-515657 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse Espin expression in Espin transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

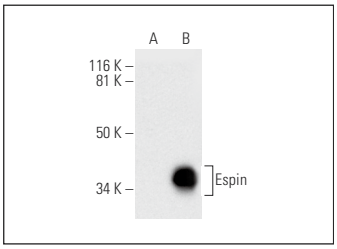
RECOMMENDED SUPPORT REAGENTS

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



Espin (E-1): sc-515657. Western blot analysis of Espin expression in non-transfected: sc-117752 (**A**) and mouse Espin transfected: sc-125310 (**B**) 293T whole cell lysates.



Espin (E-7): sc-393469. Western blot analysis of Espin expression in non-transfected: sc-117752 (**A**) and mouse Espin transfected: sc-125310 (**B**) 293T whole cell lysates.

RESEARCH USE

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