

# FASP1 (S-18): sc-83615

## BACKGROUND

Mapping to chromosome 21q22.11, the FASP1 gene (FAPP1-associated protein 1) encodes a 233 amino acid protein that is homologous to the fission yeast protein Mis18. In yeast, Mis18 is localized to the centrosome and forms a complex with Mis16 to maintain the deacetylated state of histones specifically in the central core of centromeres. FASP1, also known as Protein Mis18- $\alpha$  and C21orf45, is required for the recruitment of CENP-A to centrosomes and is thereby essential for normal chromosome segregation during mitosis. With expression in testis, FASP1 exists as a homodimer, a hetero-dimer with Mis18B or is present in a complex containing other Mis18 family members. FASP1 has been shown to bind to pp5644 in HeLa cells, where overexpression of pp5644 leads to inhibited growth and colony formation.

## REFERENCES

1. Tyson, J., Tranebjaerg, L., Bellman, S., Wren, C., Taylor, J.F., Bathen, J., Aslaksen, B., Sørland, S.J., Lund, O., Malcolm, S., Pembrey, M., Bhattacharya, S. and Bitner-Glindzic, M. 1997. IsK and KvLQT1: mutation in either of the two subunits of the slow component of the delayed rectifier potassium channel can cause Jervell and Lange-Nielsen syndrome. *Hum. Mol. Genet.* 6: 2179-2185.
2. Müller, S., Stanyon, R., Finelli, P., Archidiacono, N. and Wienberg, J. 2000. Molecular cytogenetic dissection of human chromosomes 3 and 21 evolution. *Proc. Natl. Acad. Sci. USA* 97: 206-211.
3. Hayashi, T., Fujita, Y., Iwasaki, O., Adachi, Y., Takahashi, K. and Yanagida, M. 2004. Mis16 and Mis18 are required for CENP-A loading and histone deacetylation at centromeres. *Cell* 118: 715-729.
4. Ye, X.X., Lu, H., Yu, Y., Ding, N., Zhang, N.L., Huo, K.K., Wan, D.F., Li, Y.Y. and Gu, J.R. 2005. P5644 interacts with phosphatidylinositol-4-phosphate adaptor protein-1 associated protein-1. *Mol. Cell. Biochem.* 271: 151-158.
5. Mao, R., Wang, X., Spitznagel, E.L.Jr., Frelin, L.P., Ting, J.C., Ding, H., Kim, J.W., Ruczinski, I., Downey, T.J. and Pevsner, J. 2005. Primary and secondary transcriptional effects in the developing human Down syndrome brain and heart. *Genome Biol.* 6: R107.
6. Robakis, N.K. 2006. The discovery and mapping to chromosome 21 of the Alzheimer's amyloid gene: history revised. *J. Alzheimers Dis.* 10: 453-455.
7. Ait Yahya-Graisson, E., Aubert, J., Dauphinot, L., Rivals, I., Prieur, M., Golfier, G., Rossier, J., Personnaz, L., Creau, N., Bléhaut, H., Robin, S., Delabar, J.M. and Potier, M.C. 2007. Classification of human chromosome 21 gene-expression variations in Down syndrome: impact on disease phenotypes. *Am. J. Hum. Genet.* 81: 475-491.
8. Peterson, L.F., Boyapati, A., Ahn, E.Y., Biggs, J.R., Okumura, A.J., Lo, M.C., Yan, M. and Zhang, D.E. 2007. Acute myeloid leukemia with the 8q22;21q22 translocation: secondary mutational events and alternative t(8;21) transcripts. *Blood* 110: 799-805.
9. Ryoo, S.R., Jeong, H.K., Radnaabazar, C., Yoo, J.J., Cho, H.J., Lee, H.W., Kim, I.S., Cheon, Y.H., Ahn, Y.S., Chung, S.H. and Song, W.J. 2007. Dyrk1A-mediated hyperphosphorylation of Tau: A functional link between Down syndrome and Alzheimer's disease. *J. Biol. Chem.* 282: 34850-34857.

## CHROMOSOMAL LOCATION

Genetic locus: MIS18A (human) mapping to 21q22.11; Mis18a (mouse) mapping to 16 C3.3.

## SOURCE

FASP1 (S-18) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of FASP1 of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-83615 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

FASP1 (S-18) is recommended for detection of FASP1 of mouse and human origin by Western Blotting (starting dilution 1:200, 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).

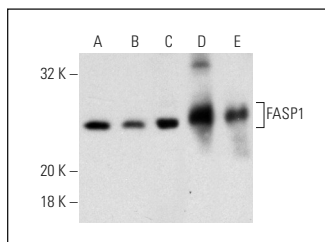
FASP1 (S-18) is also recommended for detection of FASP1 in additional species, including bovine.

Suitable for use as control antibody for FASP1 siRNA (h): sc-91518, FASP1 shRNA Plasmid (h): sc-91518-SH and FASP1 shRNA (h) Lentiviral Particles: sc-91518-V.

Molecular Weight of FASP1: 26 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HeLa nuclear extract: sc-2120 or mouse testis extract: sc-2405.

## DATA



FASP1 (S-18): sc-83615. Western blot analysis of FASP1 expression in HeLa (A) and NTERA-2 (B) whole cell lysates, HeLa nuclear extract (C) and mouse brain (D) and mouse testis (E) tissue extracts.

## STORAGE

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