

# Fe65 (h): 293T Lysate: sc-175237

## BACKGROUND

$\gamma$ -secretase cleaves the cell surface protein amyloid protein precursor (APP) at the transmembrane region into an extracellular peptide ( $\beta$ -amyloid) and an intracellular tail fragment. The cytoplasmic tail of APP forms a multimeric complex with Fe65 (also known as APBB1 for APP binding protein family B member 1). Specifically, Fe65 binds the YENPTY sequence in the cytoplasmic tail of APP. Fe65 is a nuclear adaptor protein widely expressed in the brain, including hippocampus and isocortex. In the cell, Fe65 and APP co-localize to the ER and Golgi. The interaction between APP and Fe65 increases the trans-location of APP to the cell surface and the subsequent secretion of  $\beta$ -amyloid. Fe65 and APP localize with Mena, a cell-adhesion protein, and Fe65 regulates APP-dependent changes in cell motility. The gene encoding human Fe65 maps to chromosome 11p15.4.

## REFERENCES

1. Duilio, A., et al. 1991. A rat brain mRNA encoding a transcriptional activator homologous to the DNA binding domain of retroviral integrases. *Nucleic Acids Res.* 19: 5269-5274.
2. Bressler, S.L., et al. 1996. cDNA cloning and chromosome mapping of the human Fe65 gene: interaction of the conserved cytoplasmic domains of the human  $\beta$ -amyloid precursor protein and its homologues with the mouse Fe65 protein. *Hum. Mol. Genet.* 5: 1589-1598.
3. Borg, J.P., et al. 1996. The phosphotyrosine interaction domains of X11 and Fe65 bind to distinct sites on the YENPTY motif of amyloid precursor protein. *Mol. Cell. Biol.* 16: 6229-6241.
4. Guenette, S.Y., et al. 1999. hFe65L influences amyloid precursor protein maturation and secretion. *J. Neurochem.* 73: 985-993.
5. Sabo, S.L., et al. 1999. Regulation of  $\beta$ -amyloid secretion by Fe65, an amyloid protein precursor-binding protein. *J. Biol. Chem.* 274: 7952-7957.
6. Ando, K., et al. 2001. Phosphorylation-dependent regulation of the interaction of amyloid precursor protein with Fe65 affects the production of  $\beta$ -amyloid. *J. Biol. Chem.* 276: 40353-40361.

## CHROMOSOMAL LOCATION

Genetic locus: APBB1 (human) mapping to 11p15.4.

## PRODUCT

Fe65 (h): 293T Lysate represents a lysate of human Fe65 transfected 293T cells and is provided as 100  $\mu$ g protein in 200  $\mu$ l SDS-PAGE buffer.

## 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](http://www.scbt.com) for detailed protocols and support products.

## APPLICATIONS

Fe65 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Fe65 antibodies.

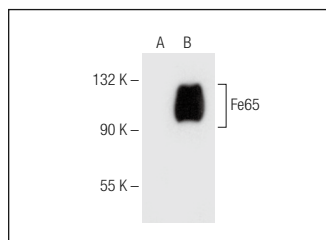
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Fe65 (D-11): sc-374641 is recommended as a positive control antibody for Western Blot analysis of enhanced human Fe65 expression in Fe65 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

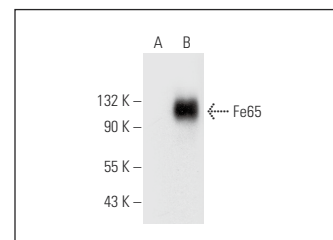
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:  
1) Western Blotting: use m-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, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

## DATA



Fe65 (D-11): sc-374641. Western blot analysis of Fe65 expression in non-transfected: sc-117752 (A) and human Fe65 transfected: sc-175237 (B) 293T whole cell lysates.



Fe65 (F-6): sc-398389. Western blot analysis of Fe65 expression in non-transfected: sc-117752 (A) and human Fe65 transfected: sc-175237 (B) 293T whole cell lysates.

## RESEARCH USE

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