

Fe65 (E-20): sc-19751

BACKGROUND

γ -secretase cleaves the cell surface protein amyloid protein precursor (APP) at the transmembrane region into an extracellular peptide (β -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 colocalize to the ER and Golgi. The interaction between APP and Fe65 increases the translocation of APP to the cell surface and the subsequent secretion of β -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.

CHROMOSOMAL LOCATION

Genetic locus: APBB1 (human) mapping to 11p15.4; Apbb1 (mouse) mapping to 7 E3.

SOURCE

Fe65 (E-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Fe65 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-19751 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Fe65 (E-20) is recommended for detection of Fe65 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Fe65 (E-20) is also recommended for detection of Fe65 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Fe65 siRNA (h): sc-41954, Fe65 siRNA (m): sc-41955, Fe65 shRNA Plasmid (h): sc-41954-SH, Fe65 shRNA Plasmid (m): sc-41955-SH, Fe65 shRNA (h) Lentiviral Particles: sc-41954-V and Fe65 shRNA (m) Lentiviral Particles: sc-41955-V.

Molecular Weight of Fe65: 85-90 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, NIH/3T3 whole cell lysate: sc-2210 or Fe65 (h): 293T Lysate: sc-175237.

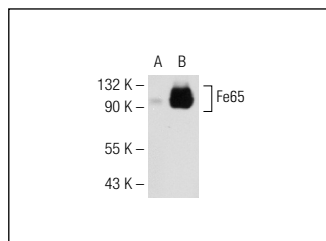
STORAGE

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

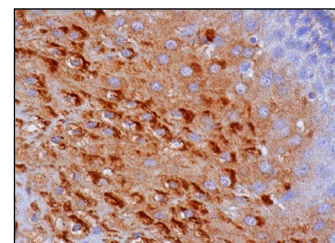
RESEARCH USE

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

DATA



Fe65 (E-20): sc-19751. Western blot analysis of Fe65 expression in non-transfected: sc-117752 (A) and human Fe65 transfected: sc-175237 (B) 293T whole cell lysates.



Fe65 (E-20): sc-19751. Immunoperoxidase staining of formalin fixed, paraffin-embedded human esophagus tissue showing cytoplasmic staining of squamous epithelial cells.

SELECT PRODUCT CITATIONS

1. von Rotz, R.C., et al. 2004. The APP intracellular domain forms nuclear multiprotein complexes and regulates the transcription of its own precursor. *J. Cell Sci.* 117: 4435-4448.
2. Hiltunen, M., et al. 2006. Ubiquitin 1 modulates amyloid precursor protein trafficking and A β secretion. *J. Biol. Chem.* 281: 32240-32253.
3. Eisele, Y.S., et al. 2007. Gleevec increases levels of the amyloid precursor protein intracellular domain and of the amyloid- β degrading enzyme neprilysin. *Mol. Biol. Cell* 18: 3591-3600.
4. Takahashi, K., et al. 2009. Amyloid precursor protein promotes endoplasmic reticulum stress-induced cell death via C/EBP homologous protein-mediated pathway. *J. Neurochem.* 109: 1324-1337.
5. Ha, S., et al. 2011. Association of AICD and Fe65 with Hirano bodies reduces transcriptional activation and initiation of apoptosis. *Neurobiol. Aging* 32: 2287-2298.
6. Viswanathan, J., et al. 2013. Ubiquitin-1 modulates γ -secretase-mediated ϵ -site cleavage in neuronal cells. *Biochemistry* 52: 3899-3912.

PROTOCOLS

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