



Fe65L2 (N-12): sc-107214

BACKGROUND

Fe65L2 (FE65-like protein 2), also known as SRA or APBB3 (amyloid β (A4) precursor protein-binding, family B, member 3), is a 486 amino acid protein that contains one WW domain and two PID domains. Binding to the intracellular domain of the β -Amyloid precursor protein, Fe65L2 is thought to modulate the internalization and, therefore, the accessibility and function of β -Amyloid. Via its ability to control the intracellular accumulation of β -Amyloid, Fe65L2 is thought to play a role in the pathogenesis of Alzheimer's disease. Fe65L2 exists as four alternatively spliced isoforms designated isoform I, isoform II, isoform III and isoform IV. Fe65L2 interacts with Amyloid-like protein and is encoded by a gene located on human chromosome 5, which contains 181 million base pairs and comprises nearly 6% of the human genome. Deletion of the p arm of chromosome 5 leads to Cri du chat syndrome, while deletion of the q arm of chromosome 5 altogether is common in therapy-related acute myelogenous leukemias and myelodysplastic syndrome.

REFERENCES

- Guenette, S.Y., et al. 1996. Association of a novel human Fe65-like protein with the cytoplasmic domain of the β -Amyloid precursor protein. *Proc. Natl. Acad. Sci. USA* 93: 10832-10837.
- Blanco, G., et al. 1998. Mapping of the human and murine X11-like genes (APBA2 and apba2), the murine Fe65 gene (Apb1), and the human Fe65-like gene (APBB2): genes encoding phosphotyrosine-binding domain proteins that interact with the Alzheimer's disease amyloid precursor protein. *Mamm. Genome* 9: 473-475.
- Tanahashi, H. and Tabira, T. 1999. Genome structure and chromosomal mapping of the gene for Fe65L2 interacting with Alzheimer's β -Amyloid precursor protein. *Biochem. Biophys. Res. Commun.* 258: 385-389.
- Tanahashi, H. and Tabira, T. 1999. Molecular cloning of human Fe65L2 and its interaction with the Alzheimer's β -Amyloid precursor protein. *Neurosci. Lett.* 261: 143-146.
- Tanahashi, H., et al. 2002. c954C \rightarrow T polymorphism in the Fe65L2 gene is associated with early-onset Alzheimer's disease. *Ann. Neurol.* 52: 691-693.
- Bruni, P., et al. 2002. Fe65, a ligand of the Alzheimer's β -Amyloid precursor protein, blocks cell cycle progression by down-regulating thymidylate synthase expression. *J. Biol. Chem.* 277: 35481-35488.
- Lange, A., et al. 2005. The apoptosis inhibitory domain of FE65-like protein 1 regulates both apoptotic and caspase-independent programmed cell death mediated by tumor necrosis factor. *Biochem. Biophys. Res. Commun.* 335: 575-583.
- Li, Y., et al. 2005. Genetic association of the APP binding protein 2 gene (APBB2) with late onset Alzheimer disease. *Hum. Mutat.* 25: 270-277.
- Golanska, E., et al. 2008. Analysis of APBB2 gene polymorphisms in sporadic Alzheimer's disease. *Neurosci. Lett.* 447: 164-166.

STORAGE

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

CHROMOSOMAL LOCATION

Genetic locus: APBB3 (human) mapping to 5q31.3.

SOURCE

Fe65L2 (N-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Fe65L2 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-107214 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Fe65L2 (N-12) is recommended for detection of Fe65L2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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); non cross-reactive with family members Fe65L or APBB1P.

Suitable for use as control antibody for Fe65L2 siRNA (h): sc-91884, Fe65L2 shRNA Plasmid (h): sc-91884-SH and Fe65L2 shRNA (h) Lentiviral Particles: sc-91884-V.

Molecular Weight of Fe65L2: 50 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.