SANTA CRUZ BIOTECHNOLOGY, INC.

AIFL (H-300): sc-292446

BACKGROUND

AIFL (apoptosis-inducing factor-like), also known as AIFM3 (apoptosis-inducing factor, mitochondrion-associated, 3), is a 605 amino acid protein that localizes to the mitochondrion and contains one rieske domain. Expressed ubiquitously in tissues including liver, thymus, ovary, bone marrow and cerebral cortex, AIFL functions to induce apoptosis, specifically through a caspase-dependent pathway, and may also play a role in the modulation of mitochondrial membrane potential. Multiple isoforms of AIFL exist due to alternative splicing events. The gene encoding AIFL maps to human chromosome 22, which houses over 500 genes and is the second smallest human chromosome. Mutations in several of the genes that map to chromosome 22 are involved in the development of Phelan-McDermid syndrome, Neurofibromatosis type 2, autism and schizophrenia.

REFERENCES

1. Gilbert, F. 1998. Disease genes and chromosomes: disease maps of the human genome. Chromosome 22. Genet. Test. 2: 89-97.
2. Susin, S.A., et al. 1999. Molecular characterization of mitochondrial apoptosis-inducing factor. Nature 397: 441-446.
3. Cande, C., et al. 2002. Apoptosis-inducing factor (AIF): a novel caspase-independent death effector released from mitochondria. Biochimie 84: 215-222.
4. Tsilchorozidou, T., et al. 2004. Constitutional rearrangements of chromosome 22 as a cause of neurofibromatosis 2. J. Med. Genet. 41: 529-534.
5. Urbano, A., et al. 2005. AIF suppresses chemical stress-induced apoptosis and maintains the transformed state of tumor cells. EMBO J. 24: 2815-2826.
6. Xie, Q., et al. 2005. Molecular cloning and characterization of a human AIF-like gene with ability to induce apoptosis. J. Biol. Chem. 280: 19673-19681.
7. Arinami, T. 2006. Analyses of the associations between the genes of 22q11 deletion syndrome and schizophrenia. J. Hum. Genet. 51: 1037-1045.
8. Ashktorab, H., et al. 2008. H. pylori-induced apoptosis in human gastric cancer cells mediated via the release of apoptosis-inducing factor from mitochondria. Helicobacter 13: 506-517.

CHROMOSOMAL LOCATION

Genetic locus: AIFM3 (human) mapping to 22q11.21; Aifm3 (mouse) mapping to 16 A3.

SOURCE

AIFL (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 mapping at the N-terminus of AIFL of human origin.

PRODUCT

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

RESEARCH USE

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

APPLICATIONS

AIFL (H-300) is recommended for detection of AIFL of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

AIFL (H-300) is also recommended for detection of AIFL in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for AIFL siRNA (h): sc-72467, AIFL siRNA (m): sc-140965, AIFL shRNA Plasmid (h): sc-72467-SH, AIFL shRNA Plasmid (m): sc-140965-SH, AIFL shRNA (h) Lentiviral Particles: sc-72467-V and AIFL shRNA (m) Lentiviral Particles: sc-140965-V.

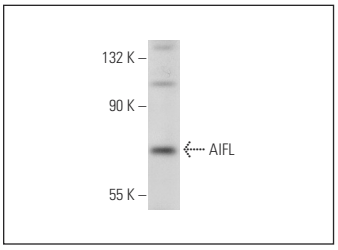
Molecular Weight of AIFL: 66 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



AIFL (H-300): sc-292446. Western blot analysis of AIFL expression in K-562 whole cell lysate.

STORAGE

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

PROTOCOLS

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