

ACYP2 (C-20): sc-26853

BACKGROUND

The formation of stable highly organized protein aggregates, known as Amyloid fibrils, is associated with several debilitating human diseases, including Alzheimer's disease, Parkinson's disease and Creutzfeldt-Jakob disease. In each of these conditions, a peptide or protein that is normally soluble accumulates into insoluble fibrils. Muscle acylphosphatase (AcP) has emerged as a significant model system to study protein misfolding and aggregation. It is particularly suitable for these studies because muscle AcP is a small, simple protein of only 98 amino acids consisting of a five-stranded antiparallel β -sheet and two parallel α -helices. Mutations in the muscle AcP between residues 16-31 and 87-98, which includes its phosphate binding site at Arg-23, significantly increases the rate of aggregation. These mutations correlate with changes in the hydrophobicity of AcP and a conversion of the α -helical structures to β -sheets. Therefore, a reduction in the net charge of a protein may be a key determinant in some forms of protein deposition diseases.

REFERENCES

1. Serpell, L.C., Sunde, M. and Blake, C.C. 1997. The molecular basis of amyloidosis. *Cell. Mol. Life Sci.* 53: 871-887.
2. Chiti, F., Taddei, N., Bucciantini, M., White, P., Ramponi, G. and Dobson, C.M. 2000. Mutational analysis of the propensity for Amyloid formation by a globular protein. *EMBO J.* 19: 1441-1449.
3. Chiti, F., Taddei, N., Stefani, M., Dobson, C.M. and Ramponi, G. 2001. Reduction of the amyloidogenicity of a protein by specific binding of ligands to the native conformation. *Protein Sci.* 10: 879-886.
4. Taddei, N., Capanni, C., Chiti, F., Stefani, M., Dobson, C.M. and Ramponi, G. 2001. Folding and aggregation are selectively influenced by the conformational preferences of the α -helices of muscle acylphosphatase. *J. Biol. Chem.* 276: 37149-37154.

CHROMOSOMAL LOCATION

Genetic locus: ACYP2 (human) mapping to 2p16.2; Acyp2 (mouse) mapping to 11 A4.

SOURCE

ACYP2 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of ACYP2 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-26853 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

ACYP2 (C-20) is recommended for detection of muscle acylphosphatase 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

ACYP2 (C-20) is also recommended for detection of muscle acylphosphatase in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for ACYP2 siRNA (h): sc-38900, ACYP2 siRNA (m): sc-38901, ACYP2 shRNA Plasmid (h): sc-38900-SH, ACYP2 shRNA Plasmid (m): sc-38901-SH, ACYP2 shRNA (h) Lentiviral Particles: sc-38900-V and ACYP2 shRNA (m) Lentiviral Particles: sc-38901-V.

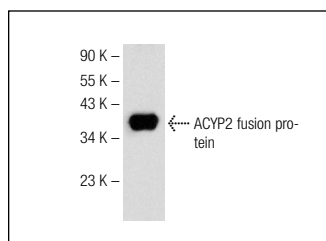
Molecular Weight of ACYP2: 11 kDa.

Positive Controls: Sol8 cell lysate: sc-2249.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



ACYP2 (C-20): sc-26853. Western blot analysis of human recombinant ACYP2 fusion protein.

RESEARCH USE

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

MONOS
Satisfaction
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Try **ACYP2 (B-3): sc-398298** or **ACYP2 (G-5): sc-398251**, our highly recommended monoclonal alternatives to ACYP2 (C-20).