SANTA CRUZ BIOTECHNOLOGY, INC.

SAA (C-16): sc-20275

BACKGROUND

The serum amyloid A (SAA) family of proteins is encoded by multiple genes, which display allelic variation and a high degree of homology in mammals. The four members of the SAA gene family are clustered on human chromosome 11p15.1. Three SAA genes are differentially expressed and encode small apolipoproteins. SAA1 and SAA2 encode the acute phase SAAs (A-SAAs), and SAA4 encodes the constitutively expressed SAA (C-SAA). A fourth locus, SAA3 is a pseudogene that contains two C/EBP-binding sites and a third site, which interacts with SAA3 enhancer factor. Human SAA proteins are a group of apolipoproteins found predominantly in the high-density lipoprotein (HDL) fraction of plasma. SAA is a major acute-phase protein and precursor to amyloid A protein, which is the major constituent of the fibril deposits of reactive amyloidosis. SAA is secreted in large amounts by the liver during microbial infections or inflammatory diseases.

REFERENCES

1. Kluve-Beckerman, B., Long, G.I. and Benson, M.D. 1986. DNA sequence evidence for polymorphoic forms of human serum amyloid (SAA). Biochem. Genet. 24: 795-803.
2. Kluve-Beckerman, B., Dwulet, F.E. and Benson, M.D. 1988. Human serum amyloid A. Three hepatic mRNAs and the corresponding proteins in one person. J. Clin. Invest. 82: 1670-1675.
3. Beach, C.M., De Beer, M.C., Sipe, J.D., Loose, L.D. and De Beer, F.C. 1992. Human serum amyloid A protein. Complete amino acid sequence of a new variant. Biochem. J. 282: 615-620.
4. Sellar, G.C., Oghene, K., Boyle, S., Bickmore, W.A. and Whitehead, A.S. 1994. Organization of the region encompassing the human serum amyloid A (SAA) gene family on chromosome 11p15.1. Genomics 23: 492-495.
5. Bing, Z., Reddy, S.A., Ren, Y., Qin, Y. and Liao, W.S. 1999. Purification and characterization of the serum amyloid A3 enhancer factor. J. Biol. Chem. 274: 24649-24656.
6. Artl, A., Marsche, G., Lestavel, S., Sattler, W. and Malle, E. 2000. Role of serum amyloid A during metabolism of acute-phase HDL by macrophages. Arterioscler. Thromb. Vasc. Biol. 20: 763-772.
7. Badolato, R., Wang, J.M., Stornello, S.L., Ponzi, A.N., Duse, M. and Musso, T. 2000. Serum Amyloid A is an activator of PMN antimicrobial functions: induction of degranulation, phagocytosis, and enhancement of anti-Candida activity. J. Leukoc. Biol. 67: 381-386.

CHROMOSOMAL LOCATION

Genetic locus: SAA1/SAA2/SAA3P/SAA4 (human) mapping to 11p15.1; Saa1/Saa2/Saa3/Saa4 (mouse) mapping to 7 B4.

SOURCE

SAA (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of SAA of human origin.

RESEARCH USE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-20275 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

SAA (C-16) is recommended for detection of SAA1, SAA2 and SAA3 of human origin, SAA3 and SAA4 of mouse origin, and LOC687992 and SAA4 of rat 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).

SAA (C-16) is also recommended for detection of SAA1, SAA2 and SAA3 in additional species, including equine, canine, bovine and porcine.

Molecular Weight of SAA: 12 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.

SELECT PRODUCT CITATIONS

1. Salguero, G., Schuett, H., Jagielska, J., Schley, R., Tallone, E., Luchtefeld, M., Drexler, H., Müller, W., Grote, K. and Schieffer, B. 2009. Hepatocyte gp130 deficiency reduces vascular remodeling after carotid artery ligation. Hypertension 54: 1035-1042.

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.