

AWAT2 (T-12): sc-161526

BACKGROUND

AWAT2 (acyl-CoA wax alcohol acyltransferase 2), also known as DC4 (diacylglycerol O-acyltransferase candidate 4), MFAT (multifunctional O-acyltransferase) or WS (wax synthase), is a 333 amino acid multi-pass membrane protein and multifunctional acyltransferase belonging to the diacylglycerol acyltransferase family. Highly expressed in undifferentiated peripheral sebocytes of skin where it is suggested to function in lipid metabolism, AWAT2 is also found in tissues such as the preputial gland and eyelid, which are rich in sebaceous glands. As an acyltransferase, AWAT2 primarily produces wax esters by esterifying wax with acyl-CoA-derived fatty acids and likely catalyzes the synthesis of retinyl esters and diacylglycerols. The gene encoding AWAT2 maps to human chromosome Xq13.1 and mouse chromosome X C3.

REFERENCES

1. Yamashita, A., et al. 1997. Acyltransferases and transacylases involved in fatty acid remodeling of phospholipids and metabolism of bioactive lipids in mammalian cells. *J. Biochem.* 122: 1-16.
2. Winter, A., et al. 2003. Genomic organization of the DGAT2/MOGAT gene family in cattle (*Bos taurus*) and other mammals. *Cytogenet. Genome Res.* 102: 42-47.
3. Cheng, J.B. and Russell, D.W. 2004. Mammalian wax biosynthesis. II. Expression cloning of wax synthase cDNAs encoding a member of the acyltransferase enzyme family. *J. Biol. Chem.* 279: 37798-37807.
4. Turkish, A.R., et al. 2005. Identification of two novel human acyl-CoA wax alcohol acyltransferases: members of the diacylglycerol acyltransferase 2 (DGAT2) gene superfamily. *J. Biol. Chem.* 280: 14755-14764.
5. Yen, C.L., et al. 2005. A human skin multifunctional O-acyltransferase that catalyzes the synthesis of acylglycerols, waxes, and retinyl esters. *J. Lipid Res.* 46: 2388-2397.
6. Wältermann, M., et al. 2007. Key enzymes for biosynthesis of neutral lipid storage compounds in prokaryotes: properties, function and occurrence of wax ester synthases/acyl-CoA: diacylglycerol acyltransferases. *Biochimie* 89: 230-242.

CHROMOSOMAL LOCATION

Genetic locus: AWAT2 (human) mapping to Xq13.1; AWAT2 (mouse) mapping to X C3.

SOURCE

AWAT2 (T-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of AWAT2 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.

Blocking peptide available for competition studies, sc-161526 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

AWAT2 (T-12) is recommended for detection of AWAT2 of mouse, rat and 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 other AWAT1 family members.

Suitable for use as control antibody for AWAT2 siRNA (h): sc-90922, AWAT2 siRNA (m): sc-143020, AWAT2 shRNA Plasmid (h): sc-90922-SH, AWAT2 shRNA Plasmid (m): sc-143020-SH, AWAT2 shRNA (h) Lentiviral Particles: sc-90922-V and AWAT2 shRNA (m) Lentiviral Particles: sc-143020-V.

Molecular Weight of AWAT2: 38 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.

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.

PROTOCOLS

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