

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human SCD-1 in direct ELISAs and Western blots. In direct ELISAs, less than 5% cross-reactivity with recombinant human SCD-5 and recombinant mouse SCD-1 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human SCD-1 Ala141-Gly221 Accession # O00767
Conjugate	Alexa Fluor 532 Excitation Wavelength: 534 nm Emission Wavelength: 553 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide
	*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Knockout Validated	Optimal dilution of this antibody should be experimentally determined.
Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunoprecipitation	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

SCD-1 (Stearoyl-CoA desaturase 1; also Acyl-CoA desaturase, fatty acid desaturase, and Delta-9 desaturase) is a 37-40 kDa member of the fatty acid desaturase family of enzymes. It is an ER-embedded protein that is expressed by multiple cell types, including adipocytes, hepatocytes, macrophages, endothelial and sebaceous gland cells. SCD-1 catalyzes the formation of monounsaturated fatty acids from saturated fatty acids. It does so by generating a double bond between the C9 and C10 carbons of dietary and/or endogenously synthesized fatty acids. This creates either palmitoleic or oleic acid, two fatty acids that are optimally suited for either storage or inclusion into phospholipids. It also removes a potential source of inflammation, as saturated fatty acids are known to activate TLRs with the subsequent onset of inflammation. Human SCD-1 is a 4-transmembrane (TM), 359 amino acid (aa) protein. It contains a 71 aa cytoplasmic N-terminus, followed by two TM segments (aa 72-119) and an extended cytoplasmic region (aa 120-216) that possesses three utilized Ser/Thr phosphorylation sites, two additional TM segments (aa 217-273), and a C-terminal cytoplasmic tail (aa 274-359) that contains most of the catalytic region. There is one potential isoform variant that shows a 13 aa substitution for aa 295-359. Over aa 141-221, human SCD-1 shares 95% aa sequence identity with mouse SCD-1.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc., and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.