Human SorCS1 Alexa Fluor® 405-conjugated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF3457V
100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human SorCS1 in direct ELISAs and Western blots. In direct ELISAs, approximately 20% cross-reactivity with recombinant mouse SorCS1 is observed and less than 1% cross-reactivity with recombinant human (rh) SorCS2 and rhSorCS3 is observed
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human SorCS1 Ser111-Ser1099 (Ser231Gly) Accession # Q8WY21.3
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 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.*

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunocytochemistry	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

SorCS1 is a type I transmembrane receptor of the mammalian Vps10p (vacuolar protein-sorting 10 protein) family (1, 2). These sorting receptors include sortilin, SorLA, and three SorCS proteins. Three splicing variants (SorCS1a, b and c) differ only in their cytoplasmic domains (3). All variants are predominantly expressed in the central nervous system, but SorCS1 can also be identified in heart, kidney and pancreatic islets (2-5). SorCS1a mediates endocytosis, and only ~10% of it is expressed on the cell surface. SorCS1b shows higher surface expression (~45%) and is much less involved in endocytosis. SorCS1c is intermediate. Human SorCS1a is synthesized as a 1159 amino acid (aa) preproform with a 33 aa signal sequence and a 77 aa propeptide. After proteolytic processing at a furin-type consensus sequence, the mature SorCS1a is a 1049 aa, 130 kDa protein with a 989 aa extracellular/lumenal domain (ECD). Within the ECD, human SorCS1 shares 93%, 94%, 93% and 98% aa identity with mouse, rat, bovine and canine SorCS1, respectively. It also shares 70% and 46% aa identity with the ECD of human SorCS3 and SorCS2, respectively. The ECD contains an imperfect leucine-rich repeat (LRR) and a Vps10p domain and binds the growth factor PDGF-BB (1, 2, 6). Expression in the hippocampus indicates that SorCS1 may modulate PDGF-BB activity in this location (6). SorCS1 has also been identified as a susceptibility gene for type 2 diabetes in overweight females (4). Consequently, it has been proposed to affect insulin secretion by modifying PDGF-mediated growth of the islet vasculature (7). The 80 kDa ECD may be constitutively or inducibly shed, mainly via the metalloproteinase TACE/ADAM17 (6). The shed soluble form also binds PDGF. The cellular portion appears to undergo regulated intramembrane proteolysis (8).

PRODUCT SPECIFIC NOTICES

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