Human SIRPγ/CD172g Alexa Fluor® 488-conjugated Antibody

Antigen Affinity-purified Polyclonal Sheep IgG
Catalog Number: AF4486G
100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human SIRPγ/CD172g in direct ELISAs and Western blots. In direct ELISAs, less than 5% cross-reactivity with recombinant human (rh) SIRPα, rhSIRPβ1, and recombinant mouse SIRPα is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human SIRPγ/CD172g Val64-Ser364, (Val263Ala) and (Ser286Leu) Accession # Q9P1W8
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 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.*

CyTOF-ready	Optimal dilution of this antibody should be experimentally determined.
Western Blot	Optimal dilution of this antibody should be experimentally determined.
Flow Cytometry	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

Signal regulatory protein gamma (SIRPγ, designated CD172g), also called SIRPβ2, is a monomeric 45-47 kDa type I transmembrane glycoprotein belonging to the SIRP/SHPS (CD172) family of the Ig superfamily (1 - 5). SIRP members are “paired receptors” with homology in the extracellular domain but variability in the C-terminus and signaling function (1, 2). The 387 amino acid (aa) SIRPγ sequence contains a 28 aa potential signal sequence, a 332 aa extracellular domain (ECD) with four potential N-glycosylation sites, a 23 aa transmembrane domain and a 4 aa cytoplasmic sequence. SIRPγ contains one V-type Ig-like domain that contains a J-like sequence and two C1-type Ig-like domains within its ECD (1, 2). Isoforms that lack one (isoform 2, 276 aa) or two (isoform 3, 170 aa) membrane-proximal C-type Ig-like domains have been described (5). Within the ECD, human SIRPγ isoform 1 shares 78% aa identity with human SIRPβ1, and appears to have structurally similar orthologs only in rhesus monkey and chimpanzee (100% and 91% aa identity, respectively) (2). SIRPγ is the only SIRP known to be expressed on T cells, $CD56^{bright}$ NK cells and activated NK cells; it is not expressed on myeloid cells (5, 6). It shows adhesion to CD47, but at lower affinity than SIRPα (6). Expression of SIRPγ on T cells suggests a role as an accessory protein interacting with CD47-expressing antigen presenting cells (5, 6). Unlike SIRPα that has cytoplasmic ITIM domains, and SIRPβ1 that interacts with DAP-12, SIRPγ does not contain any obvious signaling mechanism (1, 2, 6). However, SIRPγ-mediated adhesion appears to promote antigen-specific T cell proliferation and costimulate T cell activation (5).

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