Human CD229/SLAMF3 Alexa Fluor® 594-conjugated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1898T
100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human CD229/SLAMF3 in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human CD229/SLAMF3 Lys48-Lys454 Accession # Q9HBG7
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 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

CD229, also known as Ly9 and SLAMF3, is a 120 kDa type I transmembrane glycoprotein in the SLAM subgroup of the CD2 family (1). Mature human CD229 consists of a 407 amino acid (aa) extracellular domain (ECD) with two Ig-like V-set and two Ig-like truncated C2-set domains. It also shows a 22 aa transmembrane segment, and a 179 aa cytoplasmic domain with two immunoreceptor tyrosine-based switch motifs ITSMs (2, 3). The ECD of human CD229 shares 57%-59% aa sequence identity with mouse and rat CD229. Within the first two Ig-like domains that are common to all SLAM proteins, human CD229 shares 24%-39% aa sequence identity with human 2B4, BLAME, CD2F-10, CD84, CRACC, NTB-A, and SLAM. Alternate splicing generates two additional isoforms that lack the juxtamembrane Ig-like domain or short cytoplasmic region (2). CD229 is expressed on T and B cells, thymocytes, and more weakly on NK cells (2-6). Homophilic binding between CD229 molecules is mediated by the N-terminal Ig-like domain (7). Human and mouse CD229 exhibit cross-species binding (7). Antigen stimulation of lymphocytes induces CD229 clustering to sites of T cell - B cell contact (7). Two tyrosines in the cytoplasmic domain are required for association of CD229 with the adaptor proteins AP-2 (µ2 chain) and GRB-2 and both are required for CD229 internalization (8, 9). In addition, there are two ITSMs which mediate phosphorylation-dependent CD229 association with SAP and SHP-2 (10). These four tyrosine-containing motifs are intact in the described CD229 splice variants. CD229 knockout mice show minimally impaired immune responses, suggesting functional redundancy with other molecules (11).

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