Data Sheet (Cat.No.TMAH-00225)

TargetMol

Anti-CD81 Antibody (2A854)

Product Details

Ig Type:	IgG1
Reactivity:	Human
Conjugation:	Unconjugated
Clone:	2A854
Purification:	Protein G purified

Applications

Verified Activity:	1. Overlay histogram showing Jurkat cells stained with TMAH-00225 (red line) at 1:200. The cells were fixed in 4% formaldehyde and permeated by 0.2% TritonX-100. Then 10% normal goat serum was Incubated to block non-specific protein-protein interactions followed by the antibody (11μg/1*10^6 cells) for 1 h at 4°C. The secondary antibody used was FITC-conjugated Goat Anti-Mouse IgG(H+L) at 1/100 dilution for 30min at 4°C. Isotype control antibody (green line) was mouse IgG1 (1μg/1*106cells) used under the same conditions. Acquisition of >10,000 events was performed. 2. Overlay histogram showing Hela cells stained with TMAH-00225 (red line) at 1:200. The cells were fixed in 4% formaldehyde and permeated by 0.2% TritonX-100. Then 10% normal goat serum was Incubated to block non-specific protein-protein interactions followed by the antibody (1μg/1*10^6 cells) for 1 h at 4°C. The secondary antibody used was FITC-conjugated Goat Anti-Mouse IgG(H+L) at 1/100 dilution for 30min at 4°C. Isotype control antibody (green line) was mouse IgG1 (1μg/1*106cells) used under the same conditions. Acquisition of >10,000 events was performed.
Application:	ELISA,FCM

Properties

Purity:	>95%
Stability & Storage:	Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.
Shipping:	Shipping with blue ice.

Antigen Details

Immunogen:	Recombinant Protein: Human CD81 Protein
Antigen Species:	Human
Gene ID:	975
Uniprot ID:	P60033
Synonyms:	S5.7;TSPAN28;TAPA1;CVID6;CD81 molecule
Biology Area:	Immunology

Research Background

Structural component of specialized membrane microdomains known as tetraspanin-enriched microdomains

(TERMs), which act as platforms for receptor clustering and signaling. Essential for trafficking and compartmentalization of CD19 receptor on the surface of activated B cells. Upon initial encounter with microbial pathogens, enables the assembly of CD19-CR2/CD21 and B cell receptor (BCR) complexes at signaling TERMs, lowering the threshold dose of antigen required to trigger B cell clonal expansion and antibody production. In T cells, facilitates the localization of CD247/CD3 zeta at antigen-induced synapses with B cells, providing for costimulation and polarization toward T helper type 2 phenotype. Present in MHC class II compartments, may also play a role in antigen presentation. Can act both as positive and negative regulator of homotypic or heterotypic cell-cell fusion processes. Positively regulates sperm-egg fusion and may be involved in acrosome reaction. In myoblasts, associates with CD9 and PTGFRN and inhibits myotube fusion during muscle regeneration. In macrophages, associates with CD9 and beta-1 and beta-2 integrins, and prevents macrophage fusion into multinucleated giant cells specialized in ingesting complement-opsonized large particles. Also prevents the fusion of mononuclear cell progenitors into osteoclasts in charge of bone resorption. May regulate the compartmentalization of enzymatic activities. In T cells, defines the subcellular localization of dNTPase SAMHD1 and permits its degradation by the proteasome, thereby controlling intracellular dNTP levels. Also involved in cell adhesion and motility. Positively regulates integrin-mediated adhesion of macrophages, particularly relevant for the inflammatory response in the lung. (Microbial infection) Acts as a receptor for hepatitis C virus (HCV) in hepatocytes. Association with CLDN1 and the CLDN1-CD81 receptor complex is essential for HCV entry into host cell. (Microbial infection) Involved in SAMHD1-dependent restriction of HIV-1 replication. May support early replication of both R5- and X4-tropic HIV-1 viruses in T cells, likely via proteasome-dependent degradation of SAMHD1. (Microbial infection) Specifically required for Plasmodium falciparum infectivity of hepatocytes, controlling sporozoite entry into hepatocytes via the parasitophorous vacuole and subsequent parasite differentiation to exoerythrocytic forms.

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