

Purified anti-human CD81 (4A1.3.3.22)

Store at: -20°C

Package: 100µg (trial size: 20µg)



Overview

Product Description:	Purified anti-human CD81
Host/Isotype:	Mouse / IgG1,k
Class:	Monoclonal
Clone:	4A1.3.3.22
Reactivity:	Human
Applications:	ELISA, WB, Flow
Alternate Name:	TAPA1; Tspan-29; S5.7; Target of the antiproliferative antibody; Tetraspanin-28; CVID6; TSPAN28

Properties

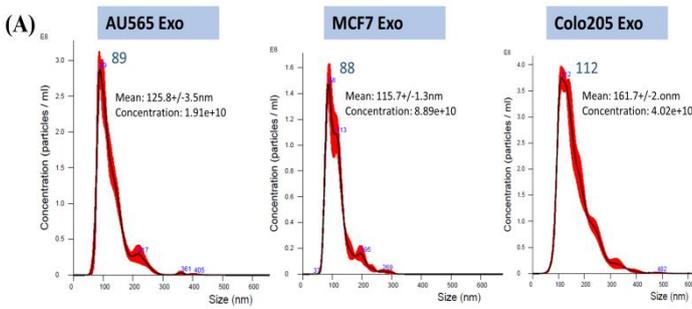
Form	Liquid
Concentration	1 mg/mL
Storage instructions	Shipped at 4°C; upon delivery aliquot and store at -20°C or -80°C; avoid repeated freeze/thaw cycles
Storage buffer	PBS(pH 7.4), containing 0.09% sodium azide
Note	FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES.

Description

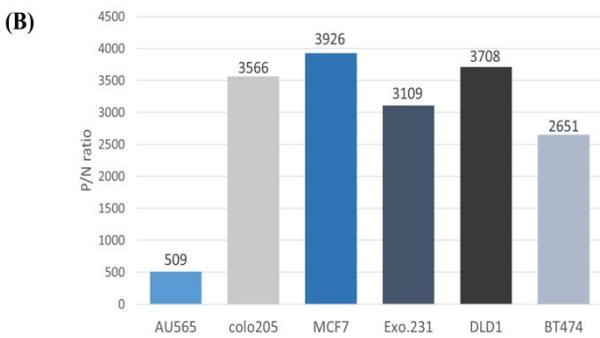
4A1.3.3.22 reacts with the CD81, a target for anti-proliferative antigen (TAPA-1) with 26 kDa MW, which is a member of the TM4SF tetraspanin family. CD81 is broadly expressed on hemopoietic cells and endothelial and epithelial cells, but absent from erythrocytes and platelets as well as neutrophils. CD81 play role as a member of CD19/CD21/Leu-13 signal transduction complex. It also is reported that anti-TAPA-1 antibody induce protein tyrosine phosphorylation that is prevented by increased intercellular thiol levels.

Images

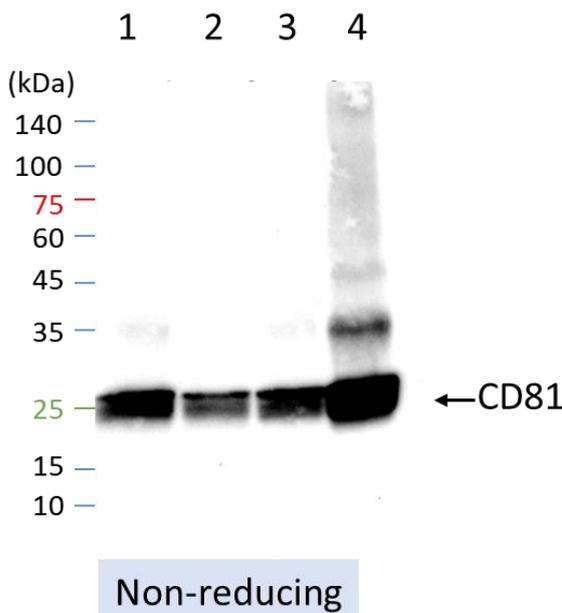
Anti-CD81(4A1.3.3.22) can detect several kinds of cell lines exosome via indirect ELISA assay



(A) To ensure antigen quality, exosome from different cell lines were measured by nanoparticle tracking analysis (NTA). Histogram shows mean peak and particle concentration of three selected cell lines exosomes, breast cancer cell line (AU565, MCF7), and colorectal cancer cell line (Colo205).



(B) Each kind of exosome was coated overnight with 5µg, and stained for CD81 with 4A1.3.3.22 at 1/1000 dilution in indirect ELISA assay. This data showed the P/N ratio, which means 1st Ab +2nd Ab signal / 2nd Ab only signal, were very high. This data can ensure the signal is coming from 4A1.3.3.22, not from non-specific binding.



WB analysis of different cell lines exosome using anti-CD81(4A1.3.3.22)

All lanes: Anti-CD81 antibody (4A1.3.3.22) at 1/1,000 dilution

Lane 1: Colo 205 cell line exosome (5µg)

Lane 2: MDA-MB-231 cell line exosomes (5µg)

Lane 3: MCF7 cell line exosomes (5µg)

Lane 4: DLD-1 cell line exosome (5µg)

Secondary

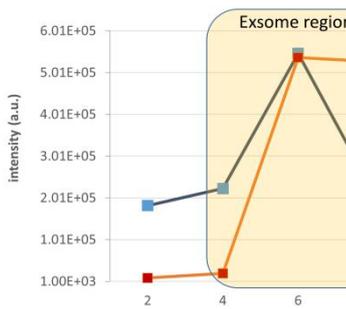
All lanes: Goat Anti-Mouse IgG1 at 1/20,000 dilution

Predicted band size: 25 kDa

Non-reducing form: sample treated with 4x Laemmli Sample Buffer

CD81 Abs + MS.HRPS (IgG1) with

Anti-CD81(4A1.3.3.22) can precisely capture exosome particles rather than soluble form protein in human plasma sample



Plasma samples were fractionated by SEC (size exclusion chromatography) method. Exosome particles were predicted to exist at fractions 4-7, and the protein to exist in after the tenth tube in soluble form.

These results showed 4A1.3.3.22 antibodies could precisely capture exosome particles in fractions 4-7. On the other side, another brand CD81 antibody did not focus on exosome particles (still has high signal in fractions 10-16), which may cause non-specific signals.