Data Sheet (Cat.No.TMAH-00874)

Anti-Podoplanin Antibody (7J57)

Product Details

Ig Type:	Mouse IgG2a
Reactivity:	Human, Mouse
Conjugation:	Unconjugated
Clone:	7J57
Purification:	Affinity-chromatography

Applications

Verified Activity:	1. Western Blot -Positive WB detected in: PC-3 whole cell lysate, SY5Y whole cell lysate, U251 whole cell lysate, HepG2 whole cell lysate -All lanes: PDPN antibody at 1:1000 -Secondary: Goat polyclonal to mouse IgG at 1/50000 dilution -Predicted band size: 17 kDa -Observed band size: 17 kDa 2. IHC image of TMAH-00874 diluted at 1:300 and staining in paraffin-embedded human colorectal cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a Goat anti-Mouse IgG labeled by HRP and visualized using 0.05% DAB. 3. IHC image of TMAH-00874 diluted at 1:300 and staining in paraffin-embedded human placenta tissue performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a Goat anti-Mouse IgG labeled by HRP and visualized using 0.05% DAB. 4. Overlay Peak curve showing 293 cells stained with TMAH-00874 (red line) at 1:100. The cells were fixed in 4% formaldehyde (15min) and permeated by 0.2% TritonX-100 for 10min. Then 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (1ug/1*10^6 cells) for 45min at 4°C. The secondary antibody used was FITC-conjugated Goat Anti-Mouse IgG(H+L) at 1/200 dilution for 35 min at 4°C. Isotype control antibody (green line) was mouse IgG1 (1μg/1*10^6 cells) used under the same conditions. Acquisition of >10,026 events was performed.
Application:	ELISA,FCM,IHC,WB

Recommended WB:1:1000-1:5000; IHC:1:20-1:200; FCM:1:20-1:200.

Properties

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 PDPN Protein

Antigen Species: Human

Gene ID: 10630

Uniprot ID: Q86YL7

Synonyms: T1A2;HT1A-1;T1A;OTS8;GP36;podoplanin;T1A-2;GP40;PA2.26;TI1A;AGGRUS;Gp38

Biology Area: Cardiovascular, Tags & Cell Markers

Research Background

Mediates effects on cell migration and adhesion through its different partners. During development plays a role in blood and lymphatic vessels separation by binding CLEC1B, triggering CLEC1B activation in platelets and leading to platelet activation and/or aggregation. Interaction with CD9, on the contrary, attenuates platelet aggregation induced by PDPN. Through MSN or EZR interaction promotes epithelial-mesenchymal transition (EMT) leading to ERZ phosphorylation and triggering RHOA activation leading to cell migration increase and invasiveness. Interaction with CD44 promotes directional cell migration in epithelial and tumor cells. In lymph nodes (LNs), controls fibroblastic reticular cells (FRCs) adhesion to the extracellular matrix (ECM) and contraction of the actomyosin by maintaining ERM proteins (EZR; MSN and RDX) and MYL9 activation through association with unknown transmembrane proteins. Engagement of CLEC1B by PDPN promotes FRCs relaxation by blocking lateral membrane interactions leading to reduction of ERM proteins (EZR; MSN and RDX) and MYL9 activation. Through binding with LGALS8 may participate in connection of the lymphatic endothelium to the surrounding extracellular matrix. In keratinocytes, induces changes in cell morphology showing an elongated shape, numerous membrane protrusions, major reorganization of the actin cytoskeleton, increased motility and decreased cell adhesion. Controls invadopodia stability and maturation leading to efficient degradation of the extracellular matrix (ECM) in tumor cells through modulation of RHOC activity in order to activate ROCK1/ROCK2 and LIMK1/LIMK2 and inactivation of CFL1. Required for normal lung cell proliferation and alveolus formation at birth. Does not function as a water channel or as a regulator of aquaporin-type water channels. Does not have any effect on folic acid or amino acid transport.

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