

# Anti-Podoplanin

Polyclonal Antibody

Cat. # **ABT34**

Lot # **NRG1935578**

pack size: **100 µg**

Store at 2-8°C

FOR RESEARCH USE ONLY  
NOT FOR USE IN DIAGNOSTIC PROCEDURES  
NOT FOR HUMAN OR ANIMAL CONSUMPTION



## Certificate of Analysis

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Applications	Species Cross-Reactivity	Antibody Isotype	Epitope/Region	Host Species	Molecular Weight	Accession #
WB, IH(P)	H, M, (Chp)	N/A	Extracellular Domain	Rb	~ 27 kDa	NP_006465

### Background

Podoplanin, also known as T1 alpha and Aggrus, is a mucin-type transmembrane glycoprotein with extensive O-glycosylation. It is specifically expressed by lymphatic endothelial cells but not by blood vascular endothelial cells. Podoplanin regulates lymphatic vascular formation and platelet aggregation and is thought to be involved in cell migration and/or actin cytoskeleton organization. Podoplanin expression in keratinocytes induces changes in cell morphology with transfected cells showing an elongated shape, numerous membrane protrusions, major reorganization of the actin cytoskeleton, increased motility, and decreased cell adhesion. Podoplanin does not have any effect on folic acid or amino acid transport nor does it function as a water channel or as a regulator of aquaporin-type water channels.

### Presentation

Purified rabbit polyclonal in buffer containing 0.1 M Tris-Glycine (pH 7.4), 150 mM NaCl with 0.05% sodium azide.

### Concentration

1.0 mg/mL

### Specificity

This antibody recognizes Podoplanin at the extracellular domain.

### Species Cross-reactivity

Demonstrated to react with Human and Mouse. Predicted to react with Chimpanzee based on 100% sequence homology.

### Immunogen

KLH-conjugated linear peptide corresponding to human Podoplanin at the extracellular domain.

### Molecular Weight

~27 kDa observed. Uniprot describes 4 isoforms produced by alternative splicing with molecular weights of ~17, ~18, and two at ~25 kDa. The calculated molecular weight of this protein is 25 kDa, but can be observed at ~27 kDa due to high glycosylation.

### Method of Purification

Affinity purified

### Storage and Handling

Stable for 1 year at 2-8°C from date of receipt.

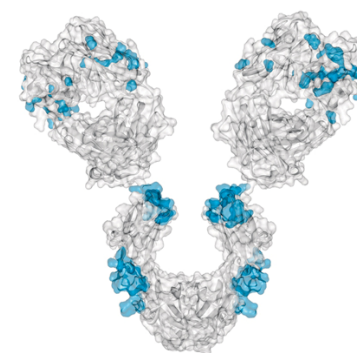
### Control

Human lung tissue lysate

### Quality Control Testing

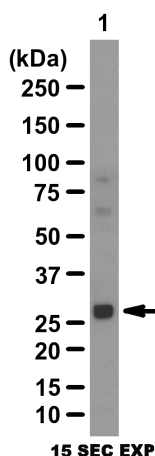
Evaluated by Western Blotting in human lung tissue lysate.

Western Blotting Analysis: 0.5 µg/mL of this antibody detected Podoplanin on 10 µg of human lung tissue lysate.



### References

1. Grimaldo, S., et al. (2010). *Lymphology*. 43(3):128-134.
2. Karmali, P.P., et al. (2009). *Nanomedicine*. 5(1):73-82.
3. Brunet-Dunard, S.E., et al. (2009). *Endocrinology*. 150(3):1341-1352.
4. Wicki, A., et al. (2007). *Br J Cancer*. 96(1):1-5.



### Western Blotting Analysis:

Representative lot data.  
Human lung tissue lysate was probed with Anti-Podoplanin (0.5 µg/mL). Proteins were visualized using a Donkey Anti-Rabbit IgG secondary antibody conjugated to HRP and a chemiluminescence detection system.

Arrow indicates Podoplanin (~27 kDa).

**APPLICATION LEGEND:** WB Western Blotting IP Immunoprecipitation IC Immunocytochemistry IF Immunofluorescence  
IH Immunohistochemistry (Tissue) IH(P) Immunohistochemistry (Paraffin) FC Flow Cytometry

**SPECIES LEGEND:** Chp Chimpanzee H Human M Mouse R Rat Rb Rabbit WR Most Common Vertebrates

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**Additional Research Applications**

**Immunohistochemistry Analysis:** A 1:1,000 dilution from a representative lot detected Podoplanin in colorectal carcinoma tissue.

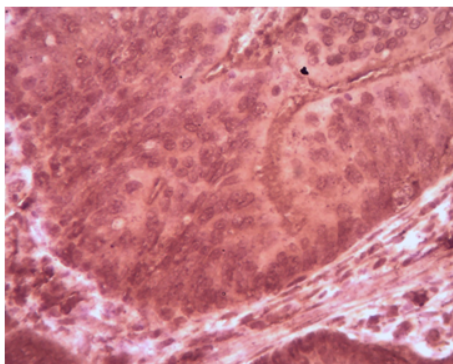


Fig. 1

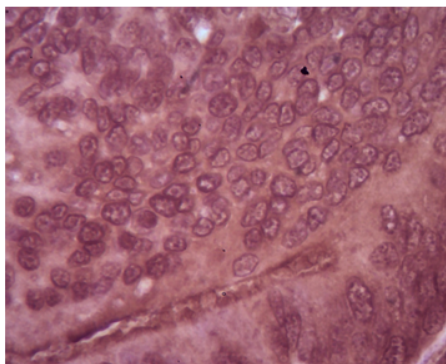


Fig. 2

**Immunohistochemistry Analysis:**  
Representative lot data.  
Paraffin-embedded colorectal carcinoma (Fig. 1 & 2) tissue was prepared using heat-induced epitope retrieval in citrate buffer, pH 6.0. Immunostaining was performed using a 1:1,000 dilution of Cat. No. ABT34, Anti-Podoplanin. Reactivity was detected using the IHC-Select® Detection Kit (Cat. No. DAB050). Staining pattern appears as diffusive cytoplasmic in solid tumors.

**PROTOCOL****Western Blotting**

1. Perform SDS-polyacrylamide gel electrophoresis (SDS-PAGE) on cell lysate and transfer the proteins to a PVDF membrane. Wash the PVDF membrane twice with water.
2. Block the blotted PVDF membrane in freshly prepared 5% BSA or milk with 0.05% Tween®-20 surfactant for 1 hour at room temperature with constant agitation.
3. Incubate the PVDF with the recommended dilution of the primary antibody, diluted in freshly prepared 5% BSA or milk for 1 hour at room temperature or overnight with agitation at 2-8°C.
4. Wash the PVDF 3 times with TBST.
5. Incubate the PVDF in the secondary reagent of choice in 5% milk for 1 hour with agitation at room temperature.
6. Wash the PVDF 3-5 times with TBST.
7. Visualize with enhanced chemiluminescence (ECL) method of choice.

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**RELATED PRODUCTS (specific)**

cat #	description
AP182P	■ Donkey anti-Rabbit IgG, HRP conjugate

**RELATED PRODUCTS (non-specific)**

cat #	description
WBAVDBASE	■ SNAP i.d.® Protein Detection System
WBAVDABTR	■ SNAP i.d. Antibody Collection Tray
WBAVDROLL	■ SNAP i.d. Blot Roller
WBAVDBH03	■ SNAP i.d. Triple Well Blot Holder
WBAVDBH01	■ SNAP i.d. Single Well Blot Holder
WBAVDBH02	■ SNAP i.d. Double Well Blot Holder
IPVH00010	■ Immobilon®-P 26.5 cm x 3.75 m Roll PVDF 0.45 µm membrane
IPFL00010	■ Immobilon-FL 26.5 cm x 3.75 m Roll PVDF 0.45 µm membrane
IPVH07850	■ Immobilon-P 7 x 8.4 cm PVDF 0.45 mm membrane (sheet) 50/pk
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ISEQ07850	■ Immobilon-P 7 x 8.4 cm PVDF 0.2 mm membrane (sheet) 50/pk
IPFL07810	■ Immobilon-FL 7 x 8.4 cm PVDF 0.45 mm membrane (sheet) 10/pk
WBKLS0100	■ Immobilon Western Chemilum HRP Substrate 100 mL
2060	■ Re-Blot™ Western Blot Recycling Kit
2500	■ Re-Blot Plus Western Blot Recycling Kit
B2080-175GM	■ Blot Quick Blocker™ Membrane Blocking Agent 175G
WBLUC0500	■ Luminata Classico Western HRP substrate, 500 mL
WBLUR0500	■ Luminata Crescendo Western HRP substrate, 500 mL

■ antibodies ■ Multiplex products ■ biotools ■ cell culture ■ enzymes ■ kits ■ proteins/peptides ■ siRNA/cDNA products

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