

#9047 Store at -20C

Podoplanin (D9D7) Rabbit mAb

**Cell Signaling**
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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP, FC-L	H	Endogenous	36	Rabbit IgG	#Q86YL7	10630

Product Usage Information**Application**Western Blotting
Immunoprecipitation
Flow Cytometry (Live)**Dilution**1:1000
1:200
1:400**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity / Sensitivity

Podoplanin (D9D7) Rabbit mAb recognizes endogenous levels of total podoplanin protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Asp31 of human podoplanin protein.

Background

Podoplanin (aggrus, glycoprotein 36) is a single-pass transmembrane protein belonging to the type-1 family of sialomucin-like glycoproteins. Podoplanin was first described in the rat as a surface glycoprotein that regulated podocyte morphology (1). It is now commonly used as a marker of lymphatic endothelial cells, where its expression is associated with the process of lymphangiogenesis (2). Its role in this regard is presumably due to its putative involvement in regulating actin cytoskeleton dynamics (3). Research studies have shown that podoplanin expression is upregulated in a number of tumor types including colorectal cancers (4), oral squamous cell carcinomas (5), and germ cell tumors (6), with higher expression levels often associated with more aggressive tumors (7). Research studies have suggested a functional role for podoplanin in the stromal microenvironment of tumors. For example, it has been reported that podoplanin expression in cancer-associated fibroblasts (CAFs) is positively associated with a stromal environment that promotes cancer progression (8,9).

Background References

- Breiteneder-Geleff, S. et al. (1997) *Am J Pathol* 151, 1141-52.
- Breiteneder-Geleff, S. et al. (1999) *Am J Pathol* 154, 385-94.
- Wicki, A. et al. (2006) *Cancer Cell* 9, 261-72.
- Omachi, T. et al. (2007) *Cancer Lett* 246, 167-72.
- Feng, J.Q. et al. (2012) *Oral Oncol* 48, 848-852.
- Mishima, K. et al. (2006) *Acta Neuropathol* 111, 563-8.
- Raica, M. et al. *Anticancer Res* 28, 2997-3006.
- Schoppmann, S.F. et al. (2012) *Breast Cancer Res Treat* 134, 237-44.
- Ito, M. et al. (2012) *Chest* 142, 151-158.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key**WB:** Western Blotting **IP:** Immunoprecipitation **FC-L:** Flow Cytometry (Live)**Cross-Reactivity Key**

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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