Anti-mouse Podoplanin

FOR RESEARCH ONLY! NOT FOR HUMAN USE!

Cat.-no.:	**103-PA40S**
Size:	100 µg
Lot. No.:	According to product label
Country of origin:	Germany

Preparation: Produced from sera of rabbits pre-immunized with highly pure (>95%) recombinant mouse soluble Podoplanin (Gly23-Leu141) derived from E. coli.

Target Background

Synonyms:	Glycoprotein 38, Transmembrane glycoprotein E11, Gp38

Podoplanin, also known as glycoprotein 38 (gp38), PA2.26 antigen, T1alpha (T1A), and aggrus, is a 38 kDa type I transmembrane sialoglycoprotein and member of the podoplanin family. Podoplanin is synthesized as a 172 amino acid (aa) precursor with a 22 aa signal sequence, a 119 aa extracellular domain (ECD), a 21 aa transmembrane region, and a short, 10 aa cytoplasmic tail. The ECD contains abundant Ser/Thr residues as potential sites for Oglycosylation, and the cytoplasmic region contains putative sites for kinase C and cAMP phosphorylation. Mouse Podoplanin shares 77% and 46% aa sequence identity with rat and human Podoplanin, respectively. Podoplanin is expressed on glomerular epithelial cells (podocytes), type I lung alveolar cells, lymphatic endothelial cells, and on numerous tumors including colorectal tumors, squamous cell carcinomas, testicular seminoma, and brain tumors. One study shows high expression of Podoplanin mRNA in placenta, lung, skeletal muscle, and heart, and weaker levels in brain, kidney, and liver. Podoplanin is the ligand for Ctype lectin like receptor 2 (CLEC2). Their association is dependent on sialic acid on Oglycans of Podoplanin. Podoplanin is also necessary for lymphatic vessel formation, normal lung cell proliferation and alveolus formation at birth.

References

1. Zimmer et al, Biochem J 341:277, 1999
2. KatsueInoue et al, J Biol Chem 282:25993, 2007
3. Kato et al, J Biol Chem 278:51599, 2003
4. Schacht et al, Am J Pathol 166:913, 2005
5. Breiteneder-Geleff et al, Am J Pathol 151:1141, 1997
6. Kato et al, Tumour Biol 26:195, 2005
7. Kato et al, Oncogene 23:8552, 2004
8. Mishima et al, Acta Neuropathol 111:563, 2006
9. Mishima et al, Acta Neuropathol 111:483, 2006
10. Kato et al, Biochem Biophys Res Commun 349:1301, 2006

Database References Antigen

Protein RefSeq:	NP_034459.2
Uniprot ID:	Q62011
mRNA RefSeq:	NM_0103292

Product Specifications

Species reactivity	mouse
Clone/Ab feature	Rabbit IgG
Cross reactivity	-
Host	rabbit
Clonality	polyclonal
Purification	Protein A purified
Immunogen	Recombinant mouse soluble Podoplanin (RT #S01-M46),
Formulation	lyophilized
Buffer	PBS

Stability: The lyophilized antibody is stable at room temperature for up to 1 month. The reconstituted antibody is stable for at least two weeks at 2-8°C. Frozen aliquots are stable for at least 6 months when stored at -20°C.

Reconstitution: Centrifuge vial prior to opening. Reconstitute in sterile water to a concentration of 0.1-1.0 mg/ml.

AVOID REPEATED FREEZE AND THAW CYCLES!

Applications

IF/IHC:	Use 10 µg/ml
Western Blot:	Use 1-5 mg/ml

NOTE: OPTIMAL DILUTIONS SHOULD BE DETERMINED BY EACH LABORATORY FOR EACH APPLICATION!

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Handling/Applications

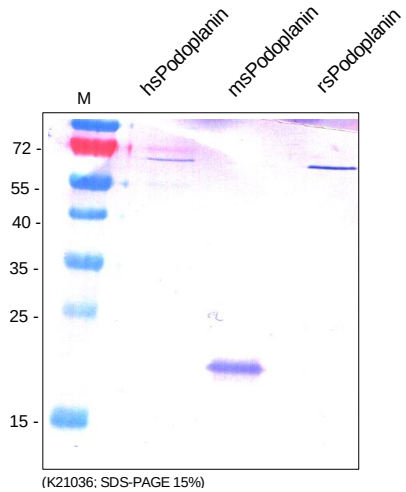

Figure 1. Western Analysis of anti-mouse Podoplanin (#K21036). Samples were loaded in 15% SDS-polyacrylamide gel under reducing conditions.
Lane 1: MWM (kDa); lane 2: rh sPodoplanin; lane 3: rm SPodoplanin; lane 4: rr sPodoplanin.