

# PRODUCT INFORMATION



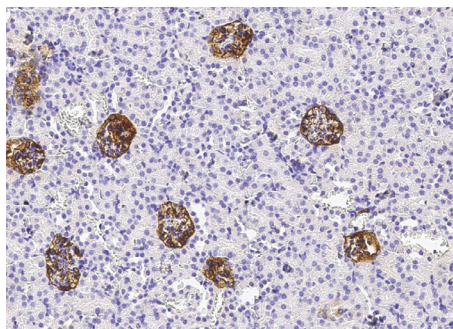
## Podoplanin Rabbit Monoclonal Antibody (Clone 066)

Item No. 38097

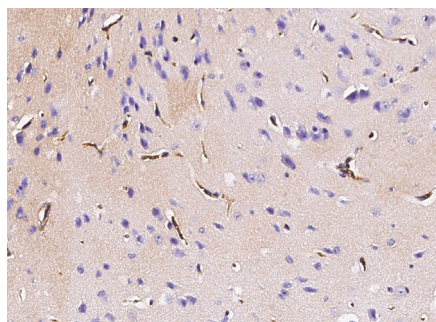
### Overview and Properties

<b>Contents:</b>	This vial contains 50 or 100 µl of protein A-affinity purified monoclonal antibody.
<b>Synonyms:</b>	Aggrus, gp38, T1A
<b>Immunogen:</b>	Recombinant mouse podoplanin
<b>Cross Reactivity:</b>	(+) Podoplanin
<b>Species Reactivity:</b>	(+) Mouse
<b>Form:</b>	Liquid
<b>Storage:</b>	-80°C (as supplied)
<b>Stability:</b>	≥1 year
<b>Storage Buffer:</b>	0.2 µm filtered solution in PBS
<b>Clone:</b>	066
<b>Host:</b>	Rabbit
<b>Isotype:</b>	IgG
<b>Application:</b>	Immunohistochemistry paraffin (IHC-P); the recommended starting dilution is 1:250-1:1,000. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

### Images



Immunohistochemical staining of formalin-fixed and paraffin-embedded mouse kidney using Podoplanin Rabbit Monoclonal Antibody (Clone 066) at a 1:500 dilution.



Immunohistochemical staining of formalin-fixed and paraffin-embedded mouse brain using Podoplanin Rabbit Monoclonal Antibody (Clone 066) at a 1:500 dilution.

**WARNING**  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

**SAFETY DATA**  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

**WARRANTY AND LIMITATION OF REMEDY**  
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 02/08/2023

**CAYMAN CHEMICAL**  
1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA  
PHONE: [800] 364-9897  
[734] 971-3335  
FAX: [734] 971-3640  
CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM

# PRODUCT INFORMATION



## Description

---

Podoplanin is a transmembrane glycoprotein that has roles in development, immunology, and cancer.<sup>1,2</sup> It is composed of a glycosylated extracellular domain, which is critical for podoplanin-induced platelet activation, a single transmembrane region that associates with CD9 and CD44, and a short cytoplasmic tail that interacts with the ezrin-radixin-moesin (ERM) family of proteins to promote rearrangement of the actin cytoskeleton, as well as the epithelial-to-mesenchymal transition (EMT) during embryonic development.<sup>2</sup> Podoplanin is expressed in various tissues during murine embryonic development but is predominantly restricted to stromal, lymphatic endothelial, and immune cells, lymphoid organs, and the heart and choroid plexus in the adult mouse.<sup>1,2</sup> Its expression is upregulated by various pro-inflammatory cytokines, including IL-22, IL-6, IFN- $\gamma$ , and TGF- $\beta$ , and is increased in T cells, fibroblasts, and macrophages during inflammation. It localizes to the cell surface within lipid rafts where it interacts with numerous proteins to modulate cell adhesion and motility.<sup>1</sup> Podoplanin binds to C-type lectin receptor 2 (CLEC-2), which is expressed on platelets, to induce platelet aggregation and activation, an effect that is inhibited by the interaction of podoplanin with CD9. Mice implanted with MCF-7 cells overexpressing podoplanin exhibit reduced primary tumor growth but enhanced tumor lymphangiogenesis and lymph node metastasis.<sup>3</sup> Tumor podoplanin expression is associated with reduced overall survival in patients with oral squamous cell carcinoma (OSCC).<sup>4</sup> Cayman's Podoplanin Rabbit Monoclonal Antibody (Clone O66) can be used for immunohistochemistry paraffin (IHC-P).

## References

---

1. Astarita, J.L., Acton, S.E., and Turley, S.J. Podoplanin: Emerging functions in development, the immune system, and cancer. *Front. Immunol.* **3**, 283 (2012).
2. Quintanilla, M., Montero-Montero, L., Renart, J., *et al.* Podoplanin in inflammation and cancer. *Int. J. Mol. Sci.* **20(3)**, 707 (2019).
3. Cueni, L.N., Hegyi, I., Shin, J.W., *et al.* Tumor lymphangiogenesis and metastasis to lymph nodes induced by cancer cell expression of podoplanin. *Am. J. Pathol.* **177(2)**, 1004-1016 (2010).
4. Kreppel, M., Scheer, M., Drebber, U., *et al.* Impact of podoplanin expression in oral squamous cell carcinoma: Clinical and histopathologic correlations. *Virchows Arch.* **456(5)**, 473-482 (2010).

CAYMAN CHEMICAL  
1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA  
PHONE: [800] 364-9897  
[734] 971-3335  
FAX: [734] 971-3640  
CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM