

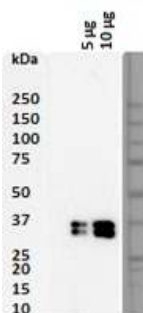
CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	Podoplanin, Human, clone LpMab12		
Catalog number	HM2376-20UG		
Lot number	-	Expiry date	-
Volume	200 µl	Amount	20 µg
Formulation	0.2 µm filtered in PBS+0.1%BSA+0.02%NaN3	Concentration	100 µg/ml
Host Species	Mouse IgG1	Conjugate	None
Endotoxin	N.A.	Purification	Protein G
Storage	4°C		

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #		1,2	1	1		1		1
Yes		•	•	•		•		•
No								
N.D.	•				•		•	

N.D. = Not Determined; IHC = Immuno histochemistry; F = Frozen sections; P = Paraffin sections; IF = Immuno Fluorescence; FC = Flow Cytometry; FS = Functional Studies; IA = Immuno Assays; IP = Immuno Precipitation; W = Western blot



W: western blot under non-reduced conditions with 5 and 10 µg MG-63 lysate. HM2376 was used in a concentration of 1 µg/ml..

Dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:50.

- IA: Antibody LpMab12 can be used as detection antibody.
- FC: HM2376 can be used both intra- and extracellular.
- W: reduced and non-reduced conditions were used. The expected band sizes are ~40 kDa.

General Information
Description

Monoclonal antibody LpMab12 recognizes Podoplanin. Podoplanin (PDPN), also known under the name Aggrus, is highly expressed in various tumors (such as oral, lung, esophageal, brain) and in normal cells as lymphatic endothelial cells and podocytes. PDPN is a small type-I membrane glycoprotein with a large number of O-glycoside chains and therefore it belongs to mucin-type proteins. It can be found on the surface of many types of normal cells originating from various germ layers. It is present primarily on the endothelium of lymphatic vessels, type I pneumocytes and glomerular podocytes. Increased levels of podoplanin or its neo-expression have been found in numerous types of human carcinomas, but it is especially common in squamous cell carcinomas, such as cervical, larynx, oral cavity, skin and lung cancer. This small sialomucin is also seen on the surface of cancer-associated fibroblasts (CAFs) in lung adenocarcinomas, as well as in breast and pancreatic tumors. In most cancers, a high level of podoplanin expression, both in cancer cells, as well as in CAFs, is correlated with an increased incidence of metastasis to lymph nodes and shorter survival time of patients. Little is known about the biological role of podoplanin, however research carried out on mice with a knock-out gene of this glycoprotein shows that the presence of podoplanin determines normal development of lungs, the lymphatic system and heart. Podoplanin on cancer cells and CAFs seems to play an important role in the development and progression of various cancers. Podoplanin possesses in its N-terminal extracellular region 3 tandem repeats of platelet aggregation-stimulating domains (PLAGs). The O-glycosylation on

Thr52 of human PDPN (hPDPN) is critical for the interaction of hPDPN with C-type lectin-like receptor-2 (CLEC-2), resulting in platelet aggregation. LpMab12 detects sialylated O-Glycan on Thr52 in PLAG. It detects endogenous hPDPN by flow cytometry. The minimal epitope of LpMab12 is identified as Asp49-Pro53 of hPDPN. LpMAB-12 did not recognize the glycosylated hPDPN synthetic peptide 38-54, but not the non-sialylated peptide. LpMab12 could serve as a diagnostic tool for determining whether hPDPN possesses sialylation on Thr52 or not.

Immunogen	LN229/hPDPN (Ref.1 and Ref.2)		
Aliases	Aggrus, Glycoprotein 36, Gp36, PA2.26 antigen, T1-alpha, T1A		
Gene	Gene name: PDPN	Entrez Gene ID: 10630	Uniprot: Q86YL7
References	<ol style="list-style-type: none">1. Kato, Y et al; LpMab-12 Established by CasMab Technology Specifically Detects Sialylated O-Glycan on Thr52 of Platelet Aggregation-Stimulating Domain of Human Podoplanin. PlosOne 2016, 11: e01529122. Kaneko, M et al; Development and characterization of anti-glycopeptide monoclonal antibodies against human podoplanin, using glycan-deficient cell lines generated by CRISPR/Cas9 and TALEN. Cancer Medicine 2017, 6:382		
Storage&stability	Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least one year.		
Precautions	For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and federal rules in the use of this product. Hycult Biotech is not responsible for any patent infringements that might result from the use or derivation of this product.		

We hereby certify that the above-stated information is correct and that this product has been successfully tested by the Quality Control Department. This product was released for sale according to the existing specifications. This document has been produced electronically and is valid without a signature.

Approved by Manager of QC
Brenda Teunissen

Date
28/12/2020

Do you have any questions or comments regarding this product? Please contact us via support@hycultbiotech.com.