

CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name Transgelin, Human, clone 4G4

Catalog number HM2405-100UG

Lot number -

Expiry date -

Volume 1 ml

Amount 100 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.

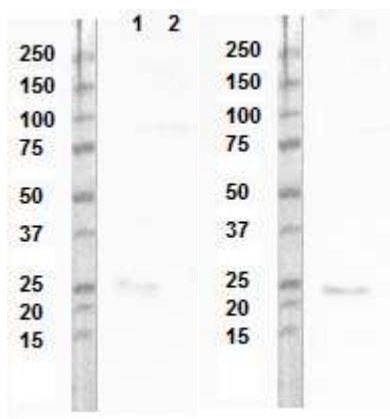
Purification Protein G

Storage 4°C

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #		2				2		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: Reduced and non-reduced western blot with antibody 4G4. Lane 1 for both blots is Transgelin purified protein and lane 2 pooled plasma.

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 4G4 can be used as capture and detection antibody (Ref. 2)
- IHC-P: For fixation 4% formaldehyde was used and blocking was done with 5% BSA in PBS (Ref.2)
- W: Both reduced and non-reduced western blot can be used. The expected band size is 22 kDa (Ref.1)

General Information

Description

Monoclonal antibody HM2405 clone 4G4 recognizes human transgelin, also called SM-22. Transgelin is a 22 kDa calponin-like protein and exists as different isoforms a-d based on different pH. It is a water-soluble protein which is abundantly expressed by intestinal smooth muscle tissues. Its role is not complete clear but it seems to play a role in differentiation and maturation of smooth muscle cells. Transgelin is considered to be a biomarker for acute intestinal ischemia (AII) and leiomyosarcoma. AII is a relative rare abdominal emergency associated with considerable high morbidity and mortality as a consequence of obstruction of mesenteric blood flow associated with surgical procedures, hemorrhagic shock, trauma and sepsis. This leads to severe damage to the intestinal barrier and integrity. It is hypothesized that this transmural injury will lead to release of smooth muscle cell proteins like transgelin. Indeed, it has been shown that elevated levels of transgelin have been found in patients with transmural ischemia compared to controls.

The diagnosis of leiomyosarcoma is clinically important because it has been reported that soft tissue sarcomas showing a myoid differentiation, most often a smooth muscle differentiation, are more aggressive than those with no myoid differentiation. Transgelin correlates with smooth muscle differentiation. It was found that transgelin was one of the most represented in leiomyosarcomatous differentiation.

Immunogen	Purified SM22 from pig stomach		
Aliases	SM22, 22 kDa actin-binding protein, Protein WS3-10, Smooth muscle protein 22-alpha, SMCC, TAGLN1, WS3-10, SM22-alph		
Gene	Gene Name: TAGLN	Uniprot: Q01995	Entrez Gene ID: 6876
References	<ol style="list-style-type: none">1. Chiavegato, A et al; Differential expression of SM22 isoforms in myofibroblasts and smooth muscle cells from rabbit bladder. J Muscle Res Cell Motil. 1999;20:1332. Schellekens, D et al; SM22 a plasma biomarker for human transmural intestinal ischemia. Ann Surg. 2018;268:120.		
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
16/04/2021

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