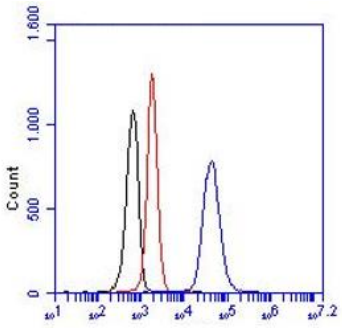
CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	Proteinase 3, Human, clone PR3G-2		
Catalog number	HM2172-100UG		
Lot number	-	**Expiry date**	-
Volume	1 ml	**Amount**	100 µg
Formulation	0.2 µm filtered in PBS+0.1%BSA	**Concentration**	100 µg/ml
Host Species	Mouse IgG1	**Conjugate**	None
Endotoxin	<24 EU/mg	**Purification**	Protein G
Storage	4°C		

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #				1,3	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



FC: Flow cytometry with HL-60 cells. Black line represents cells only, red line the isotype control and blue line HM2172 in a concentration of 2µg/250000 cells.

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.

- FS: inhibition of anti-Pr3 moAb-induced respiratory burst upon pretreatment with AR-447 (10 µM) and RWJ-67657 (1 µM) (Ref. 2).

General Information

Description

Monoclonal antibody PR3G-2 reacts with human proteinase 3 (PR3), a 30 kDa protein. PR3 is a major antigen recognized by autoantibodies directed against cytoplasmic proteins of neutrophilic granulocytes and monocytes (called anti-neutrophil cytoplasmic autoantibodies (ANCA)). ANCA are able to activate primed neutrophils to produce oxygen radicals and release lytic enzymes, including PR3. Proteinase 3 (PR3) was identified as the target antigen of ANCA in Wegener's granulomatosis (WG). ANCA directed against PR3 (PR3-ANCA) can interfere with the binding of PR3 to its physiological inhibitor alpha1-antitrypsin (alpha1-AT) and with the proteolytic activity of PR3. At the site of inflammation, PR3 can cleave the PR3-ANCA complex between these inhibiting ANCA and PR3 itself, leaving active PR3. Autoantibodies to PR3 are potent activators of the 5-lipoxygenase pathway in primed human neutrophils. Extracellular free arachidonic acid, as present at an inflammatory focus, synergizes with such autoantibodies to evoke full-blown lipid mediator generation, granule secretion and respiratory burst. Proteinase 3 (PR3) is a neutral serine proteinase, which is localized in the azurophilic granules of neutrophils and in granules of monocytes and can be detected in the membrane of secretory vesicles. PR3 degrades a number of extracellular matrix proteins such as elastin and inactivates human C1 inhibitor. Membrane-associated PR3 is also able to activate caspase-3 without triggering apoptosis of neutrophils, which is possibly a neutrophil survival mechanism. In addition, PR3 is involved in myeloid differentiation and is, therefore, also called myeloblastin. The monoclonal antibody PR3G-2 was produced by immunization of mice with a crude granule extract.

Aliases	PR3
References	1. Geld van der, Y et al; Characterization of monoclonal antibodies to proteinase 3 (PR3) as candidate tools for epitope mapping of human anti-PR3 autoantibodies. Clin Exp Immunol 1999, *118*: 487 2. Van der Veen, B et al; Effects of p38 mitogen-activated protein kinase inhibition on anti-neutrophil cytoplasmic autoantibody pathogenicity in vitro and in vivo. Ann Rheum Dis 2011, 70:356 3. Freeley, S et al; Granulocyte colony stimulating factor exacerbates antineutrophil cytoplasmic antibody vasculitis Ann Rheum Dis 2013, 72:1053
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	Date
Brenda Teunissen	03/12/2019

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