Datasheet for ABIN2192030

anti-PRTN3 antibody

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Overview

Quantity:	100 µg
Target:	PRTN3
Reactivity:	Human
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This PRTN3 antibody is un-conjugated
Application:	Western Blotting (WB), Flow Cytometry (FACS), Immunohistochemistry (Frozen Sections) (IHC (fro)), Immunohistochemistry (Paraffin-embedded Sections) (IHC (p)), Immunoassay (IA), Inhibition Assay (InhA), Activation (Act)

Product Details

Clone:	WGM2
Sterility:	0.2 µm filtered

Target Details

Target:	PRTN3
Alternative Name:	Proteinase 3 (PRTN3 Products)
Background:	Monoclonal antibody WGM2 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 (so called anti-neutrophil cytoplasmic autoantibodies (ANCA)). ANCA are able to activate primed neutrophils to produce oxygen radicals and release

Target Details

	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 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. Monoclonal antibody WGM2 blocks the PR3 activity and partially inhibits the binding of human PR3-ANCA to PR3.

Application Details

Application Notes:	For flow cytometry, Western blotting and immunohistology 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. For inhibition of biological activity of PR3 dilutions have to be made according to the amounts of proteinase 3 to be inactivated.
Restrictions:	For Research Use only

Handling

Buffer:	PBS, containing 0.1 % bovine serum albumin.
Storage:	4 °C
Storage Comment:	Product should be stored at 4 °C. Under recommended storage conditions, product is stable for one year.
Expiry Date:	12 months

Publications

Product cited in:

Pelletier, Okawara, Vitale, Anderson: "Differential distribution of the tight-junction-associated protein ZO-1 isoforms alpha+ and alpha- in guinea pig Sertoli cells: a possible association with F-actin and G-actin." in: **Biology of reproduction**, Vol. 57, Issue 2, pp. 367-76, (1997) (PubMed).

Van Itallie, Balda, Anderson: "Epidermal growth factor induces tyrosine phosphorylation and reorganization of the tight junction protein ZO-1 in A431 cells." in: **Journal of cell science**, Vol. 108 (Pt 4), pp. 1735-42, (1995) (PubMed).

Balda, Anderson: "Two classes of tight junctions are revealed by ZO-1 isoforms." in: **The American journal of physiology**, Vol. 264, Issue 4 Pt 1, pp. C918-24, (1993) (PubMed).

Willott, Balda, Heintzelman, Jameson, Anderson: "Localization and differential expression of two isoforms of the tight junction protein ZO-1." in: **The American journal of physiology**, Vol. 262, Issue 5 Pt 1, pp. C1119-24, (1992) (PubMed).

Kurihara, Anderson, Farquhar: "Diversity among tight junctions in rat kidney: glomerular slit diaphragms and endothelial junctions express only one isoform of the tight junction protein ZO-1." in: **Proceedings of the National Academy of Sciences of the United States of America**, Vol. 89, Issue 15, pp. 7075-9, (1992) (PubMed).