



Qty: 100 µg/200 µl  
Mouse anti-PAR1  
Catalog No. 35-2200  
Lot No.

## Mouse anti-PAR1

### FORM

This monoclonal antibody is supplied as a 200 µl aliquot at a concentration of 0.5 mg/ml in PBS, pH 7.4, containing 0.1% sodium azide. This antibody is highly purified from mouse ascites by protein A chromatography.

**CLONE:** ATAP2

**ISOTYPE:** Mouse IgG<sub>1</sub>

### IMMUNOGEN

A synthetic peptide corresponding to the N-terminal region of the human thrombin receptor PAR1.

### SPECIFICITY

This antibody reacts with the N-terminus of the human thrombin receptor PAR1 and recognizes both the cleaved and intact form.

### REACTIVITY

Reactivity is confirmed with ELISA against the immunizing peptide. This antibody does not cross react with PAR2. This monoclonal antibody is not recommended for use in Western Blot applications. ATAP2 was only able to detect PAR1 in extremely overexpressed cell lines in Western blots. Endogenous PAR1 could not be detected with ATAP2 in a Western blot. When used in combination with a second PAR1-directed antibody (WEDE15), ATAP2 has been shown to completely inhibit the cleavage and activation of PAR1 by thrombin. Methanol or acetone fixed CHRF cells were used in immunofluorescent and flow cytometry assays.

Sample	ELISA	Immuno-fluorescence <sup>5</sup>	Flow Cytometry <sup>2,6</sup>	Western Blotting
Human	+++	+++	+++	0

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable NA)

### USAGE

Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

**Immunofluorescence<sup>5</sup>:** 1-3 µg/ml  
**ELISA:** 0.1-1.0 µg/ml  
**Flow Cytometry<sup>2,6</sup>:** 10-20 µg/ml

### STORAGE

Store at 2-8°C for up to one month. Store at -20°C for long term storage. Avoid repeated freezing and thawing.

(cont'd)

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PI352200

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**BACKGROUND**

Serine proteases comprise a large family of enzymes that are characterized by a uniquely reactive Ser side chain. They are ubiquitous in prokaryotes and eukaryotes and serve important and diverse biological functions. Although serine proteases are usually considered to act principally as degradative enzymes, certain proteases are signaling molecules that specifically regulate cells by cleaving and triggering members of a new family of **Proteinase Activated Receptors (PARs)**. There are three members of this family, PAR-1 and PAR-3, which are receptors for thrombin, and PAR-2, a receptor for trypsin and mast cell tryptase. Proteases cleave within the extracellular NH<sub>2</sub>-terminus of their receptors to expose a new NH<sub>2</sub>-terminus. In common with many G protein-coupled receptors, PARs couple to multiple G proteins and thereby activate many parallel many mechanisms of signal transduction. PARs are expressed in multiple tissues by a wide variety of cells, where they are involved on several pathophysiological processes, including growth and development, mitogenesis, and inflammation.

**REFERENCES**

1. Dery, O. et al. *AJP-Cell Physiology* 274(6): C1429 (1998).
2. O'Brien, P.J. et al. *J. Biol. Chem.* 275(18): 13502-13509 (2000).
3. Zacharias, U. et al. *Exp. Cell. Res.* 216(2): 371-379 (1995).
4. Weinstein, J.R. et al. *J. Neurochem.* 71(13) : 1034-1050 (1998).
5. Xu, Y. et al *Am J. Pathol.* 146(1): 101-110 (1995).
6. Andrade-Gordon, P. et al. *Proc. Natl. Acad. Sci.* 96(22): 12257-12262 (1999).

**RELATED PRODUCTS**

<b>Product</b>	<b>Clone/PAD*</b>	<b>Cat. No.</b>
Mouse anti-PAR2	11B	35-2300
Mouse anti-GPCR-K2	5D5	35-0100
<i>Polyfast</i> Rabbit anti-H3L Receptor	ZMD.61	52-5457
<i>Polyfast</i> Rabbit anti-H3S Receptor	ZMD.62	52-5467
Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

\*PAD: Polyclonal Antibody Designation

<b>Conjugate</b>	<b>ZyMAX™ Goat x Rabbit IgG (H+L)</b>	<b>ZyMAX™ Goat x Mouse IgG (H+L)</b>
Purified	81-6100	81-6500
FITC	81-6111	81-6511
TRITC	81-6114	81-6514
Cy™ <sub>3</sub>	81-6115	81-6515
Cy™ <sub>5</sub>	81-6116	81-6516
HRP	81-6120	81-6520
AP	81-6122	81-6522
Biotin	81-6140	81-6540

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