

# PRODUCT INFORMATION

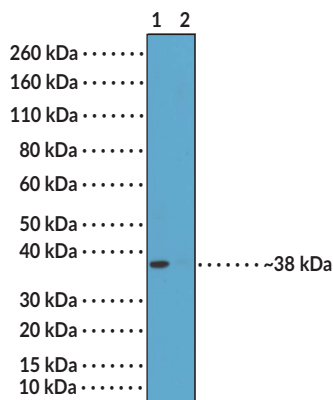
## p38α MAPK (Phospho-Thr<sup>180</sup>/Tyr<sup>182</sup>) Rabbit Monoclonal Antibody (Clone RM243)

Item No. 32197

### Overview and Properties

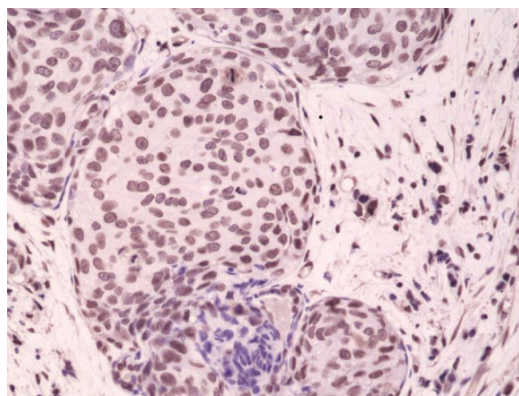
<b>Contents:</b>	This vial contains 100 μl of protein A-affinity purified monoclonal antibody.
<b>Synonyms:</b>	MAPK14 (Phospho-Thr <sup>180</sup> /Tyr <sup>182</sup> ), Mitogen-activated Protein Kinase 14 (Phospho-Thr <sup>180</sup> /Tyr <sup>182</sup> ), Mitogen-activated Protein Kinase p38α (Phospho-Thr <sup>180</sup> /Tyr <sup>182</sup> ), Stress-activated Protein Kinase 2A (Phospho-Thr <sup>180</sup> /Tyr <sup>182</sup> )
<b>Immunogen:</b>	Peptide corresponding to human p38α MAPK (phospho-Thr <sup>180</sup> /Tyr <sup>182</sup> )
<b>Cross Reactivity:</b>	(+) p38α MAPK (phospho-Thr <sup>180</sup> /Tyr <sup>182</sup> ); (-) Unmodified p38α MAPK, p38α MAPK (phospho-Thr <sup>180</sup> ), p38α MAPK (phospho-Tyr <sup>182</sup> )
<b>Species Reactivity:</b>	(+) Human
<b>Form:</b>	Liquid
<b>Storage:</b>	-20°C (as supplied)
<b>Stability:</b>	≥1 year
<b>Storage Buffer:</b>	PBS, with 50% glycerol, 1% BSA, and 0.09% sodium azide
<b>Clone:</b>	RM243
<b>Host:</b>	Rabbit
<b>Isotype:</b>	IgG
<b>Applications:</b>	Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution for IHC is 1:500-1:1,000 and 1:1,000-1:2,000 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

### Images



**Lane 1:** HeLa cell lysates (treated)  
**Lane 2:** HeLa cell lysates (untreated)

WB of HeLa cell lysates treated with anisomycin or left untreated using p38α MAPK (Phospho-Thr<sup>180</sup>/Tyr<sup>182</sup>) Rabbit Monoclonal Antibody (Clone RM243) at a 1:2,000 dilution. This showed a band of p38α MAPK (Phospho-Thr<sup>180</sup>/Tyr<sup>182</sup>) (~38 kDa) in treated HeLa cells.



Immunohistochemical staining of formalin-fixed and paraffin-embedded (FFPE) human breast cancer tissue sections using p38α MAPK (Phospho-Thr<sup>180</sup>/Tyr<sup>182</sup>) Rabbit Monoclonal Antibody (Clone RM243) at a 1:1,000 dilution.

**WARNING**  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

**SAFETY DATA**  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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## Description

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p38 MAPK is a serine/threonine protein kinase and member of the MAPK family with roles in the regulation of immune responses and embryonic development, as well as cell differentiation, metabolism, and survival.<sup>1,2</sup> It exists as 4 isoforms, p38 $\alpha$ , - $\beta$ , - $\gamma$ , and - $\delta$ , encoded by *MAPK14*, *MAPK11*, *MAPK12*, and *MAPK13*, respectively, in humans. p38 $\alpha$  MAPK is ubiquitously expressed, with the highest levels of expression in the heart, skeletal muscle, and brain.<sup>1,3</sup> It is activated *via* dual phosphorylation of threonine 180 (Thr<sup>180</sup>) and tyrosine 182 (Tyr<sup>182</sup>) by the MAP2K kinases MKK3 and MKK6 in response to LPS or the production of inflammatory cytokines and induces signaling through protein kinases, transcription factors, and transcriptional regulators, among others.<sup>1,2</sup> Levels of activated p38 $\alpha$  MAPK (p38 $\alpha$  phospho-Thr<sup>180</sup>/Tyr<sup>182</sup>) are increased and positively correlated with apoptosis in DU145 and PC3 prostate cancer cells in response to cisplatin (Item No. 13119).<sup>4</sup> p38 $\alpha$  Phospho-Thr<sup>180</sup>/Tyr<sup>182</sup> levels are also increased in adult rat ventricular monocytes during stimulated ischemia.<sup>5</sup> Cayman's p38 $\alpha$  MAPK (Phospho-Thr<sup>180</sup>/Tyr<sup>182</sup>) Rabbit Monoclonal Antibody (Clone RM243) can be used for immunohistochemistry (IHC) and Western blot (WB) applications. The antibody recognizes p38 $\alpha$  MAPK (phospho-Thr<sup>180</sup>/Tyr<sup>182</sup>) at approximately 38 kDa from human samples.

## References

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2. Han, J., Wu, J., and Silke, J. An overview of mammalian p38 mitogen-activated protein kinases, central regulators of cell stress and receptor signaling. *F1000Res.* **9**, 653 (2020).
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4. Skjøth, I.H.E. and Issinger, O.-G. Profiling of signaling molecules in four different human prostate carcinoma cell lines before and after induction of apoptosis. *Int. J. Oncol.* **28(1)**, 217-229 (2006).
5. Jacquet, S., Zarrinpashneh, E., Chavey, A., *et al.* The relationship between p38 mitogen-activated protein kinase and AMP-activated protein kinase during myocardial ischemia. *Cardiovasc. Res.* **76(3)**, 465-472 (2007).

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