PRODUCT INFORMATION

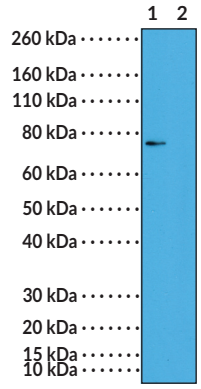
RSK1 (Phospho-Thr^{359}/Ser^{363}) Rabbit Monoclonal Antibody (Clone RM233)

Item No. 32193

Overview and Properties

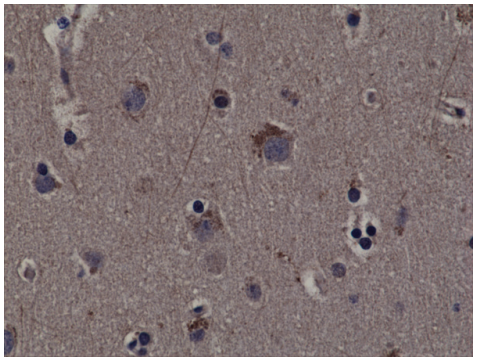
Contents:	This vial contains 100 µl of protein A-affinity purified monoclonal antibody.
Synonym:	p90 Ribosomal S6 Kinase 1 (phospho-T^{359}/S^{363})
Immunogen:	Peptide corresponding to RSK1 (phospho-Thr^{359}/Ser^{363})
Cross Reactivity:	(+) RSK1 (phospho-Thr^{359}/Ser^{363}); (-) RSK1 without phosphorylation at Thr^{359}/Ser^{363}
Species Reactivity:	(+) Human
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
Clone:	RM233
Host:	Rabbit
Isotype:	IgG
Applications:	Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution is 1:200-1:500 and 1:1,000-1:2,000 for IHC and WB, respectively. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



Lane 1: A431 cells treated
Lane 2: A431 cells untreated

WB of A431 cells treated with EGF or left untreated using RSK1 (Phospho-Thr^{359}/Ser^{363}) Rabbit Monoclonal Antibody (Clone RM233) at a dilution of 1:1,000.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human cerebral cortex tissue using RSK1 (Phospho-Thr^{359}/Ser^{363}) Rabbit Monoclonal Antibody (Clone RM233) at a dilution of 1:200.

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Description

p90 ribosomal S6 kinase 1 (RSK1) is a member of the RSK family of serine/threonine kinases that mediates RAS/RAF/MEK/ERK/MAPK signaling.[1] It contains N- and C-terminal kinase domains connected by a linker region, which contains various residues, including threonine 359 (Thr^{359}) and serine 363 (Ser^{363}), that are subject to phosphorylation and lead to its activation. RSK1 is ubiquitously expressed and localized to the cytoplasm, where it is in a complex with its activator ERK1/2 in quiescent cells.[1,2] Upon stimulation of receptor tyrosine kinases (RTKs) by a variety of cytokines, neurotransmitters, or hormones, RSK1 accumulates at the plasma membrane and is phosphorylated by ERK1/2 and 3-phosphoinositide-dependent protein kinase 1 (PDK1), resulting in dissociation of the ERK1/2-RSK1 complex and activation of RSK1.[1-3] RSK1 phosphorylates a variety of substrates that have roles in several cellular processes, including cell growth, survival, and proliferation.[2] Tumor RSK1 levels are increased in patients with breast or prostate cancer.[1] Cayman's RSK1 (Phospho-Thr^{359}/Ser^{363}) Rabbit Monoclonal Antibody (Clone RM233) can be used for immunohistochemistry (IHC) and Western blot (WB) applications.

References

1. Casalvieri, K.A., Matheson, C.J., Backos, D.S., *et al.* Selective targeting of RSK isoforms in cancer. *Trends Cancer* **3(4)**, 302-312 (2017).
2. Romeo, Y., Zhang, X., and Roux, P.P. Regulation and function of the RSK family of protein kinases. *Biochem. J.* **441(2)**, 553-569 (2012).
3. Anjum, R. and Blenis, J. The RSK family of kinases: Emerging roles in cellular signalling. *Nat. Rev. Mol. Cell Biol.* **9(10)**, 747-758 (2008).

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