

# Phospho-RSK2 (Ser227) Rabbit mAb

Catalog # AP76041

## Product Information

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Application	WB, IP
Primary Accession	<a href="#">P51812</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Monoclonal Antibody
Calculated MW	83736

## Additional Information

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Gene ID	6197
Other Names	RPS6KA3
Dilution	WB~~1/500-1/1000 IP~~1/20
Format	Liquid

## Protein Information

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Name	RPS6KA3
Synonyms	ISPK1, MAPKAPK1B, RSK2
Function	<p>Serine/threonine-protein kinase that acts downstream of ERK (MAPK1/ERK2 and MAPK3/ERK1) signaling and mediates mitogenic and stress-induced activation of the transcription factors CREB1, ETV1/ER81 and NR4A1/NUR77, regulates translation through RPS6 and EIF4B phosphorylation, and mediates cellular proliferation, survival, and differentiation by modulating mTOR signaling and repressing pro- apoptotic function of BAD and DAPK1 (PubMed:<a href="#">16213824</a>, PubMed:<a href="#">16223362</a>, PubMed:<a href="#">17360704</a>, PubMed:<a href="#">9770464</a>). In fibroblast, is required for EGF- stimulated phosphorylation of CREB1 and histone H3 at 'Ser-10', which results in the subsequent transcriptional activation of several immediate-early genes (PubMed:<a href="#">10436156</a>, PubMed:<a href="#">9770464</a>). In response to mitogenic stimulation (EGF and PMA), phosphorylates and activates NR4A1/NUR77 and ETV1/ER81 transcription factors and the cofactor CREBBP (PubMed:<a href="#">16223362</a>). Upon insulin-derived signal, acts indirectly on the transcription regulation of several genes by phosphorylating GSK3B at 'Ser-9' and inhibiting its activity (PubMed:<a href="#">8250835</a>). Phosphorylates RPS6 in response to serum or EGF via an mTOR-independent mechanism and promotes translation initiation by facilitating assembly of the preinitiation complex (PubMed:<a href="#">17360704</a>). In response to insulin, phosphorylates EIF4B, enhancing EIF4B affinity for the EIF3 complex and stimulating cap-dependent translation (PubMed:<a href="#">18508509</a>,</p>

PubMed:[18813292](#)). Is involved in the mTOR nutrient-sensing pathway by directly phosphorylating TSC2 at 'Ser-1798', which potentially inhibits TSC2 ability to suppress mTOR signaling, and mediates phosphorylation of RPTOR, which regulates mTORC1 activity and may promote rapamycin- sensitive signaling independently of the PI3K/AKT pathway (PubMed:[18722121](#)). Mediates cell survival by phosphorylating the pro- apoptotic proteins BAD and DAPK1 and suppressing their pro-apoptotic function (PubMed:[16213824](#)). Promotes the survival of hepatic stellate cells by phosphorylating CEBPB in response to the hepatotoxin carbon tetrachloride (CCl4) (PubMed:[18508509](#), PubMed:[18813292](#)). Is involved in cell cycle regulation by phosphorylating the CDK inhibitor CDKN1B, which promotes CDKN1B association with 14-3-3 proteins and prevents its translocation to the nucleus and inhibition of G1 progression (By similarity). In LPS-stimulated dendritic cells, is involved in TLR4- induced macropinocytosis, and in myeloma cells, acts as effector of FGFR3-mediated transformation signaling, after direct phosphorylation at Tyr-529 by FGFR3 (By similarity). Negatively regulates EGF-induced MAPK1/3 phosphorylation via phosphorylation of SOS1 (By similarity). Phosphorylates SOS1 at 'Ser-1134' and 'Ser-1161' that create YWHAB and YWHAE binding sites and which contribute to the negative regulation of MAPK1/3 phosphorylation (By similarity). Phosphorylates EPHA2 at 'Ser- 897', the RPS6KA-EPHA2 signaling pathway controls cell migration (PubMed:[26158630](#)). Acts as a regulator of osteoblast differentiation by mediating phosphorylation of ATF4, thereby promoting ATF4 transactivation activity (By similarity).

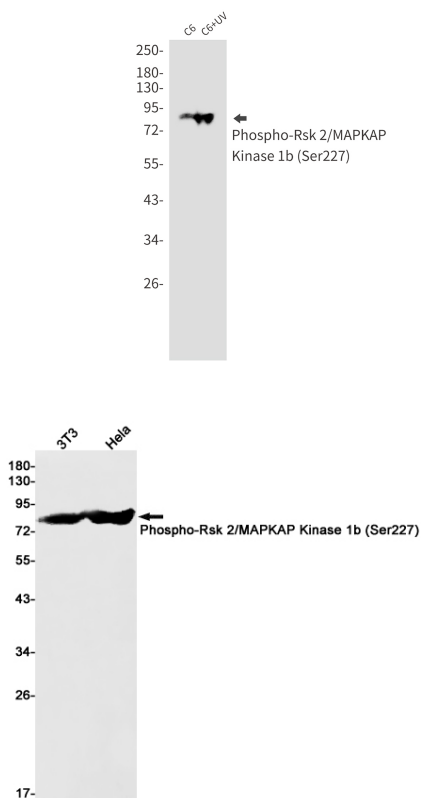
#### Cellular Location

Nucleus. Cytoplasm

#### Tissue Location

Expressed in many tissues, highest levels in skeletal muscle

## Images



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