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Product datasheet for TA389030

Phospho-S6K1 (pThr449) Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	WB
Recommended Dilution:	**WB**: 1:1000
Reactivity:	Arabidopsis
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Immunogen:	Synthetic phospho-peptide corresponding to amino acid residues surrounding Thr449 of Arabidopsis S6K1, conjugated to keyhole limpet hemocyanin (KLH).
Specificity:	Specific for endogenous levels of the ~53 kDa S6K1 protein phosphorylated at Thr449. Immunolabeling is blocked by preadsorption with the phosphopeptide used as antigen, but not by the corresponding non-phosphopeptide.
Formulation:	10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg per ml BSA and 50% glycerol.
Concentration:	lot specific
Purification:	Antigen Affinity Purified from Pooled Serum
Conjugation:	Unconjugated
Storage:	Storage at -20°C is recommended, as aliquots may be taken without freeze/thawing due to presence of 50% glycerol. Stable for at least 1 year at -20°C.
Stability:	After date of receipt, stable for at least 1 year at -20°C.
Predicted Protein Size:	53

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Background: Ribosomal s6 kinase is a member of a family of protein kinases involved in signal transduction. The subfamily S6K has two known homologues: S6K1 and S6K2. First characterized in mammals, S6K1 is controlled by target-of-rapamycin (TOR) kinase, which plays a central regulatory role in growth signaling pathways (Dufner and Thomas 1999). Osmotic stress inhibition of S6K is mediated by the TOR kinase pathway (Mahfouz et al., 2006). The activation of mammalian S6K1 involves phosphorylation at Thr-389 (Pearson et al., 2005), however its orthologue in Arabidopsis suggests that plant S6K1 Thr-449 is its functional equivalent (Schepetilnikov et al., 2011). The phytohormone auxin triggers TOR activation, which is followed by S6K1 phosphorylation at Thr-449, which in turn is critical for translation reinitiation (Schepetilnikov et al., 2013). Rapamycin effectively inactivates S6K1 Thr-449 phosphorylation in Arabidopsis seedlings, which suppresses TOR PK activity and ultimately plant growth (Xiong Y and Sheen J, 2011).

Note: Prepared from pooled rabbit serum by affinity purification via sequential chromatography on phospho and non-phosphopeptide affinity columns.