p70 S6 kinase α (T229) polyclonal antibody

Catalog: AP0598 Host: Rabbit Reactivity: Human,Rat,Mouse

BackGround:

p70 S6 kinase is a mitogen activated Ser/Thr protein kinase that is required for cell growth and G1 cell cycle progression. p70 S6 kinase phosphorylates the S6 protein of the 40S ribosomal subunit and is involved in translational control of 5' oligopyrimidine tract mRNAs. A second isoform, p85 S6 kinase, is derived from the same gene and is identical to p70 S6 kinase except for 23 extra residues at the amino terminus, which encode a nuclear localizing signal. Both isoforms lie on a mitogen activated signaling pathway downstream of phosphoinositide-3 kinase (PI-3K) and the target of rapamycin, FRAP/mTOR, a pathway distinct from the Ras/MAP kinase cascade. The activity of p70 S6 kinase is controlled by multiple phosphorylation events located within the catalytic, linker and pseudosubstrate domains. Phosphorylation of Thr229 in the catalytic domain and Thr389 in the linker domain are most critical for kinase function. Phosphorylation of Thr389, however, most closely correlates with p70 kinase activity in vivo. Prior phosphorylation of Thr389 is required for the action of phosphoinositide 3-dependent protein kinase 1 (PDK1) on Thr229. Phosphorylation of this site is stimulated by growth factors such as insulin, EGF and FGF, as well as by serum and some G-protein-coupled receptor ligands, and is blocked by wortmannin, LY294002 (PI-3K inhibitor) and rapamycin (FRAP/mTOR inhibitor). Ser411, Thr421 and Ser424 lie within a Ser-Pro-rich region located in the pseudosubstrate region. Phosphorylation at these sites is thought to activate p70 S6 kinase via relief of pseudosubstrate suppression. Another LY294002 and rapamycin sensitive phosphorylation site, Ser371, is an in vitro substrate for mTOR and correlates well with the activity of a partially rapamycin resistant mutant p70 S6 kinase.

Product:

Rabbit IgG, 1mg/ml in PBS with 0.02% sodium azide, 50% glycerol, pH7.2.

Molecular Weight:

~ 70,85 kDa

Swiss-Prot:

P23443

Purification&Purity:

The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen and the purity is > 95% (by SDS-PAGE).

Applications:

WB: 1:500~1:1000

IP: 1:50~1:200

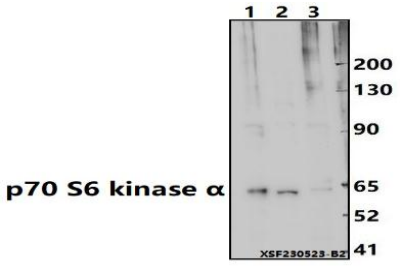
Storage&Stability:

Store at 4℃ short term. Aliquot and store at -20℃ long term. Avoid freeze-thaw cycles.

Specificity:

p70 S6 kinase α (T229) polyclonal antibody detects endogenous levels of p70 S6 kinase α protein.

DATA:



Western blot (WB) analysis of p70 S6 kinase α (T229) polyclonal antibody at 1:1000 dilution

Lane1:EC9704 whole cell lysate(30ug)

Lane2:3T3-L1 whole cell lysate(30ug)

Lane3:Hela whole cell lysate(30ug)

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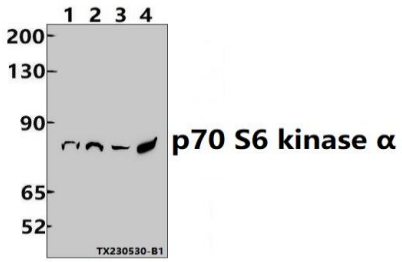


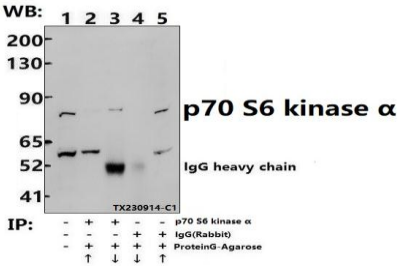
Western blot (WB) analysis of p70 S6 kinase α (T229) polyclonal antibody at 1:500 dilution

Lane1:PC12 whole cell lysate(30ug)

Lane2:CT26 whole cell lysate(30ug)

Lane3:L02 whole cell lysate(30ug)

Lane3:HEK293T whole cell lysate(30ug)



Immunoprecipitation of HEK293T cell lysates using p70 S6 kinase α (T229) pAb (Sepharose Bead Conjugate)#BD0048 (lane 2 and lane 3) and Nonspecific IgG Control (Sepharose Bead Conjugate)#BD0048 (lane 4 and lane 5) .Lane 1 is 30% input. The western blot was probed using p70 S6 kinase α (T229) pAb.

Note:

For research use only, not for use in diagnostic procedure.

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