
Product Data Sheet

PE anti-RPS6 Phospho (Ser244)

Catalog # / Size:	5278520 / 100 tests 5278515 / 25 tests	<p>□ Human peripheral blood lymphocytes were stimulated with (filled histogram) or without (open histogram) Cell Activation cocktail (without Brefeldin A) for 15 minutes, fixed with Fixation Buffer, permeabilized with True-Phos™ Perm Buffer (Cat No. 2727005), and intracellularly stained with anti-RPS6 Phospho (Ser244) (clone A18024A) PE.</p>
Clone:	A18024A	
Isotype:	Mouse IgG1, κ	
Immunogen:	Synthetic peptide corresponding to human RPS6 phosphorylated at serine 244	
Reactivity:	Human, Mouse	
Preparation:	The antibody was purified by affinity chromatography and conjugated with PE under optimal conditions. The solution is free of unconjugated PE and unconjugated antibody.	
Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA (origin USA)	
Workshop Number:	IV P38	
Concentration:	Lot-specific	

Applications:

Applications: Intracellular Flow Cytometry

Recommended Usage: Each lot of this antibody is quality control tested by intracellular immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is 5 µL per million cells in 100 µL staining volume or 5 µL per 100 µL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.

Application Notes: Sony Biotechnology offers two clones against this target, A18024A and A18024B:

For western blotting, A18024B displayed a higher affinity for RPS6 Phospho Ser244 compared to A18024A. Both clones exhibit mouse reactivity.

For ICC, A18024B displayed a moderately higher affinity for RPS6 Phospho Ser244 compared to A18024A. Both clones are mouse reactive for this application, and both clones are compatible with Triton X-100 and methanol permeabilization steps.

For ICFC, A18024A works in all three ICFC buffers (Cat# 2727005, 2705010, 2722005). For ICFC, A18024A weakly stains mouse RPS6 Phospho Ser244. A18024B is not recommended for ICFC due to high background staining.

Both clones are predicted to react with rat RPS6 when phosphorylated at serine 244 due to complete sequence homology between the immunizing sequence and the rat RPS6 ortholog.

**Application
References:**

1. Knapp W, et al. 1989. Leucocyte Typing IV. Oxford University Press. New York.
 2. McCarty OJT, et al. 2000. *Blood* 96:1789.
 3. Yoshino N, et al. 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)
 4. Zhi L et al. 2013. *PLoS One*. 8:e79869. (IHC)
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Description: Ribosomal protein S6 (RPS6) is a key component of the small 40S ribosomal subunit and is the major substrate of protein kinases in eukaryotic ribosomes. In response to various cellular stimuli such as mitogenic stimulation, insulin, and increased nutrient availability, upstream kinases such as RSK and p70 kinases phosphorylate RPS6 at multiple serine sites. These modifications facilitate the recruitment of the 7-methylguanine cap complex, thereby promoting the assembly of the translational pre-initiation complex and increased cellular protein synthesis capacity. RPS6 has been shown to be hyperphosphorylated in certain cancers, and phosphorylation is a critical determinant of pancreatic β -cell size and systemic glucose homeostasis function in diabetic mouse models.

**Antigen
References:**

1. Jefferies HB, et al. 1997. *EMBO J*. 16:3693.
2. Ruvinsky I, et al. 2005. *Genes Dev*. 18:2199-211.
3. Schumacher AM, et al. 2006. *Biochemistry*. 45:13614.
4. Roux PP, et al. 2007. *J. Biol. Chem*. 282:14056.
5. Stevens C, et al. 2009. *J. Biol. Chem*. 284:334.
6. Schlafli P, et al. 2011. *FEBS J*. 278:1757.