

Store at  
-80°C

# Lambda Protein Phosphatase Kit

#89726

1 Kit



**Support:** +1-978-867-2388 (U.S.)  
cellsignal.com/support

**Orders:** 877-616-2355 (U.S.)  
orders@cellsignal.com

**For Research Use Only. Not for Use in Diagnostic Procedures.**

Product Includes	Product #	Kit Quantity	Storage Temp
Lambda Protein Phosphatase	56206	250 µL	-80°C
Buffer for Protein MetalloPhosphatases (PMP)	90892	1 mL	-20°C
MnCl <sub>2</sub> for PMP	23517	1 mL	-20°C

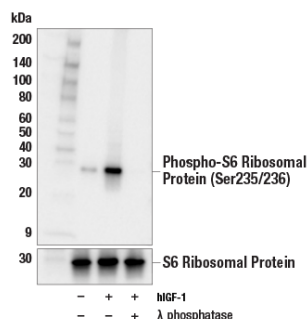
**Description:** The Lambda Protein Phosphatase Kit provides reagents that, when combined, have activity toward phosphorylated serine, threonine, and tyrosine residues. Lambda Protein Phosphatase is the 221 amino acid product of the ORF221 open reading frame on bacteriophage lambda. It is also an Mn<sup>2+</sup> dependent protein phosphatase that has the ability to release phosphate groups from phosphorylated serine, threonine, and tyrosine residues in proteins. Lambda Protein Phosphatase has a concentration of 400,000 units per mL.

**Activity:** 800,000 units per mg

**Unit Definition:** One unit is defined as the amount of enzyme that hydrolyzes 1 nmol of p-Nitrophenyl Phosphate (50 mM) in 1 min at 30°C in a total reaction volume of 50 µL.

**Specificity/Sensitivity:** The Lambda Protein Phosphatase Kit is active toward phosphorylated serine, threonine, and tyrosine residues.

**Source/Purification:** The Lambda Protein Phosphatase component is produced in a strain of *E. coli* that carries the bacteriophage lambda ORF221 open reading frame. The product is isolated using the T7 expression system.



Western blot analysis of extracts from serum-starved MCF7 cells, untreated (-) or treated (+) with combinations of the following treatments as indicated: human IGF-1 (hIGF-1; 100 ng/mL, 10 min) and lambda protein phosphatase, using Phospho-S6 Ribosomal Protein (Ser235/236) (D57.2.2E) XP<sup>®</sup> Rabbit mAb #4858 (upper) or S6 Ribosomal Protein (5G10) Rabbit mAb #2217 (lower).

**Storage:** All components in this kit are stable for 24 months when stored at the recommended temperature. Aliquot to avoid repeated freeze/thaw cycles.

**Please visit cellsignal.com for validation data and a complete listing of recommended companion products.**

#### Directions for Use:

1. Add protein sample and H<sub>2</sub>O (if necessary) to make a total volume of 40 µL.
2. Add 5 µL of 10X Buffer for Protein MetalloPhosphatases (PMP) and 5 µL of 10 mM MnCl<sub>2</sub> for PMP to make a total reaction volume of 50 µL.
3. Add 1 µL of Lambda Protein Phosphatase.
4. Incubate at 30°C for 30 min.

**Note:** The optimal incubation times and enzyme concentrations must be determined empirically for each individual substrate.

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**Applications:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry CHIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry FC-FP—Flow cytometry-Fixed/Permeabilized FC-L—Flow cytometry-Live E-P—ELISA-Peptide  
**Species Cross-Reactivity:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse  
**All**—all species expected. Species enclosed in parentheses are predicted to react based on 100% homology.