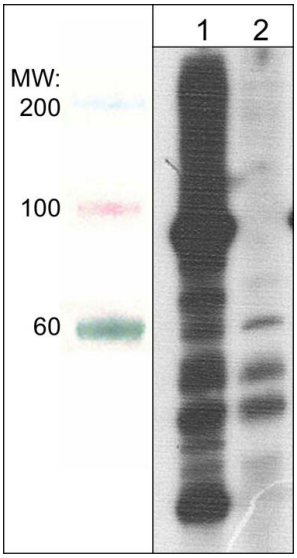
Anti-Phosphoserine/threonine

Rabbit Polyclonal

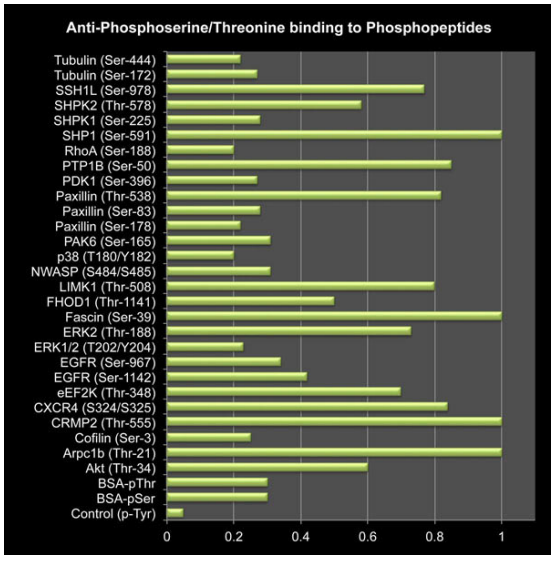
Cat. # PP2551
Size 100 µl

Background

Phosphorylation of specific serine or threonine residues is an important post-translational modification for regulating the activity of most proteins. Stimulation of a variety of cell signaling pathways activates the receptor and non-receptor ser/thr kinases that mediate these protein modifications. Antibodies that can detect phosphoserine or phosphothreonine residues are excellent tools for characterizing changes in the post-translational state of a broad range of phosphorylated proteins. Immunoprecipitation of proteins of interest followed by detection of phosphoserine or phosphothreonine using anti-phosphoserine antibody is commonly used to correlate changes in phosphorylation state with alterations in protein activity.



Western blot analysis of A431 cells treated with calyculin A (100 nM) for 30 min (lane 1) then treated with lambda phosphatase (lane 2). The blot was probed with anti-Phosphoserine/threonine rabbit polyclonal at 1:1000.



Bar graph showing anti-Phosphoserine/threonine (PP2551) binding to a variety of phosphoserine and phosphothreonine peptides, but not control peptide containing unphosphorylated serine or phosphotyrosine.

Background References

Hunter T.(1987) Cell. 50(6):823.

Krishna, R.G. & Wold, F. (1993) Adv Enzymol Rel Areas Mol Biol

Yaffe, M.B. & Elia, A.E. (2001) Curr Opin Cell Biol 13, 131-8.

Product Citations

Xue, J. et al. (2019) J Integr Plant Biol. May 14.12824.
WB: Arabidopsis

Xiao, N. et al. (2019) FASEB J. 33(1):163-174.
IP: Hek293 cells

Unger, A. et al. (2017) Acta Neuropathol Commun. 5(1):72.
WB: mouse skeletal muscle

Liu, J. et al. (2016) Cell. 167(4):1052–1066.e18.
WB: HEK293 transfectants

Tsai, C.F. et al. (2015) J Agric Food Chem. 9;63(48):10388
WB: Huh7 cells

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Immunogen

Anti-Phosphoserine/threonine was generated from a panel of phosphoserine and phosphothreonine-containing peptide immunogens designed from human protein sequences. All peptide sequences used are highly conserved in many species.

Buffer and Storage

Rabbit polyclonal, affinity-purified antibody is supplied in 100µl phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at –20°C. Stable for 1 year.

Applications

WB	1:1000
ELISA	1:2000
IP	1:100
ICC	1:50

Species Reactivity

Hu, Rt, Ms

End user should determine optimal dilution for their particular applications and experiments.
Western blot membranes were incubated with diluted antibody in 5% non-fat milk, Tris buffer, 0.04% Tween20 for 1 hour at room temperature.
Abbreviations: E = ELISA, ICC = immunocytochemistry, IHC = immunohistochemistry, IP = immunoprecipitation, MS = mass spectrometry, WB = western blot
Hu = Human, Ms = Mouse, Rt = Rat, Ck = Chicken, F = Frog, B = Bovine

Specificity

This antibody was cross-adsorbed to unphosphorylated peptide then affinity purified using a mix of phosphoserine and phosphothreonine peptides (without carrier). The antibody detects many serine or threonine phosphorylated proteins by western blot, immunocytochemistry, and ELISA.

*All molecular weights (MW) are confirmed by comparison to MW standards and to western blot mobilities of known proteins with similar MW.
"Native" western blot utilizes non-reducing sample buffer (no mercaptoethanol or SDS), normal SDS-PAGE gel electrophoresis, and no methanol in transfer buffers.

Related Products

PP2221 Anti-Phosphotyrosine Rabbit Polyclonal

PM3751 Anti-Phosphotyrosine Mouse Monoclonal

PK6330 Phospho-Tyrosine, Serine, Threonine Antibody Sampler Kit

PP4641 Anti-Phosphothreonine Rabbit Polyclonal

PM3801 Anti-Phosphoserine/threonine Mouse Monoclonal

PP4651 Anti-Phosphotyrosine:Agarose Rabbit Polyclonal

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