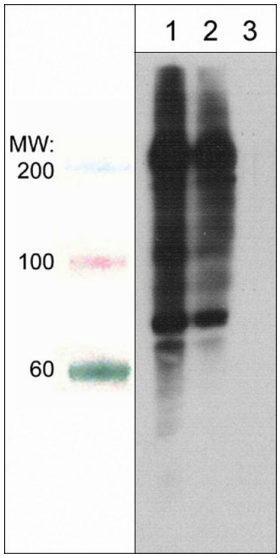
Anti-Phosphoserine/threonine

Mouse Monoclonal

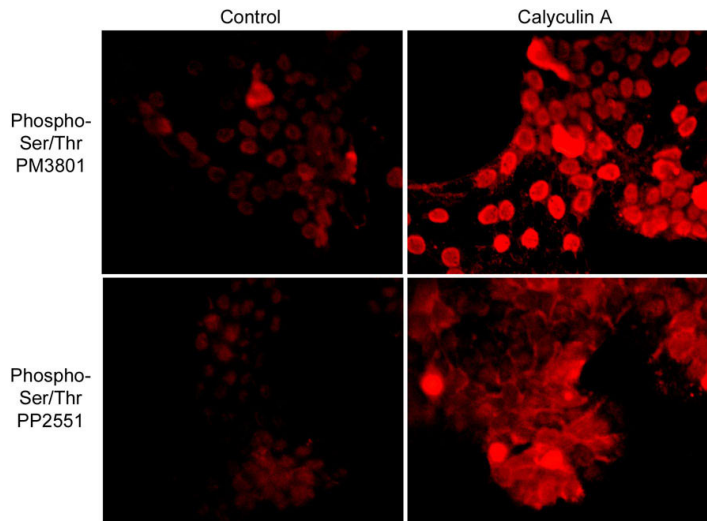
Cat. # PM3801
Size 100 µl

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 and 2) then treated with lambda phosphatase (lane 3). The blot was probed with anti-Phosphoserine/threonine mouse monoclonal at 1:250 (lane 1) or 1:1000 (lanes 2 & 3).



Immunocytochemical labeling of phosphoserine and phosphothreonine in control and calyculin A-treated A431 cells. The cells were labeled with mouse monoclonal anti-Phosphoserine/threonine (PM3801) and rabbit polyclonal anti-Phosphoserine/threonine (PP2551), then the antibodies were detected using appropriate secondary antibodies conjugated to Cy3.

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

Su, KH et al. (2019) Molecular Cell 76:1–16.
WB: human HEK293 cells

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

Malleske, DT et al. (2018) Stem Cells. 36(12):1905.
WB: human Epithelial cells

Su, KH et al. (2016) Nat Cell Biol. 18(5):527.
WB: human HEK293 cells

Osma-Garcia, I.C. et al. (2015) Eur J Immunol. doi: 10.1002
WB: mouse macrophages

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Immunogen

PM3801 Phosphoserine/threonine is a mix of two clones: Clone M380A was generated from a phosphothreonine synthetic peptide (coupled to carrier protein) and Clone M380B was generated.from a phosphoserine synthetic peptide (coupled to carrier protein).

Buffer and Storage

Mouse monoclonal antibody purified with protein A chromatography 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	1:500
ELISA	1:1000
ICC	1:50
IP	1:50

Species Reactivity

Hu, Rt, Ms

Isotype: IgG1

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

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

PP2551 Anti-Phosphoserine/threonine Rabbit Polyclonal

PP4641 Anti-Phosphothreonine Rabbit Polyclonal

PP2221 Anti-Phosphotyrosine Rabbit Polyclonal

PM3751 Anti-Phosphotyrosine Mouse Monoclonal

PP4651 Anti-Phosphotyrosine:Agarose Rabbit Polyclonal

PK6330 Phospho-Tyrosine, Serine, Threonine Antibody Sampler Kit

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