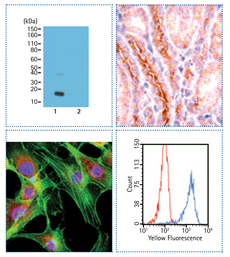
Post-Translational Modifications

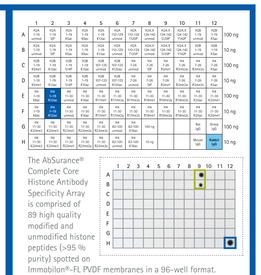
From stem cells to aging and disease, post-translational modifications (PTMs) underlie the incredible scale and dynamics of the proteome. Make sense of your cell signaling pathways by detecting and measuring PTMs.

Antibody Validation

With the combined expertise of Upstate®, Chemicon®, and Calbiochem®, Merck Millipore's extensive, focused portfolio of thoroughly validated pan and modification-specific antibodies can advance your cell signaling research.



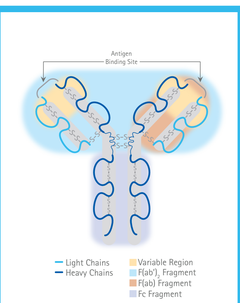
Much like Anti-Ubiquitin Antibody, Lys48-specific (Cat. No. 05-1307) shown here, our antibodies are thoroughly validated using various techniques such as Western blot (WB), immunohistochemistry (IHC), immunocytochemistry (ICC), and flow cytometry (FC).

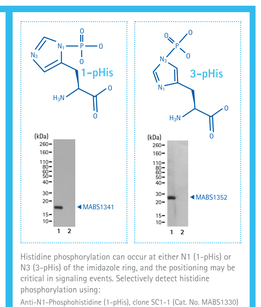


The AbSurance® Complete Core Histone Antibody Specificity Array is comprised of 89 high quality modified and unmodified histone peptides (>95 % purity) spotted on Immobilon®-FL PVDF membranes in a 96-well format. One membrane contains 46 histone H3 peptides (8 acetylated, 27 methylated, 5 phosphorylated, and 6 unmodified). The other membrane contains 43 histone H2A, H2B, H4 peptides (13 acetylated, 16 methylated, 6 phosphorylated, and 8 unmodified).

Antibody Specificity

From extremely specific targets like N1- or N3-Phosphohistidine, to the broadly versatile pan phospho-tyrosine 4G10®, Merck Millipore's precision antibodies and validation data give you confidence in your results.



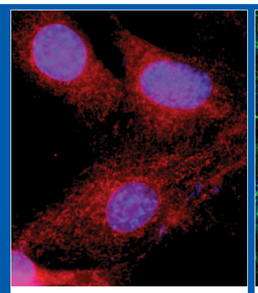


Histidine phosphorylation can occur at either N1 (1-pHis) or N3 (3-pHis) of the imidazole ring, and the positioning may be critical in signaling events. Selectively detect histidine phosphorylation using:

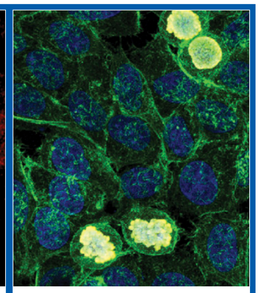
Anti-N1-Phosphohistidine (1-pHis), clone SC1-1 (Cat. No. MABS1330)
Anti-N1-Phosphohistidine (1-pHis), clone SC50-3 (Cat. No. MABS1341)
Anti-N3-Phosphohistidine (3-pHis), clone SC39-6 (Cat. No. MABS1351)
Anti-N3-Phosphohistidine (3-pHis), clone SC56-2 (Cat. No. MABS1352)

Antibody Conjugations

Merck Millipore's numerous directly conjugated primary antibodies to PTMs enable more convienient ICC protocols as well as advanced antibody applications like multiplexed staining and flow cytometry.



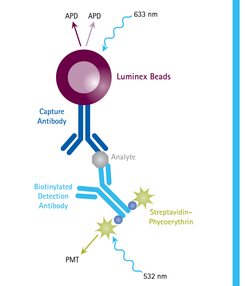
Anti-phospho-Akt1/PKBα (Ser473) Antibody, clone 11E6, Alexa Fluor® 555 (Cat. No. 16-306). Detect Serine473 phosphorylation of Akt1/PKBα (red).

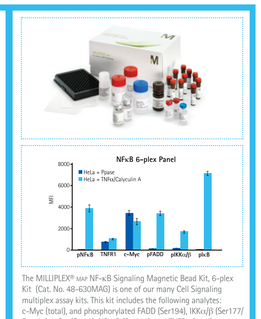


Anti-phospho Histone H3 (Ser10), Alexa Fluor® 647 (Cat. No. 06-570-AF647). Detect phosphorylated histone H3 at Serine10 (yellow).

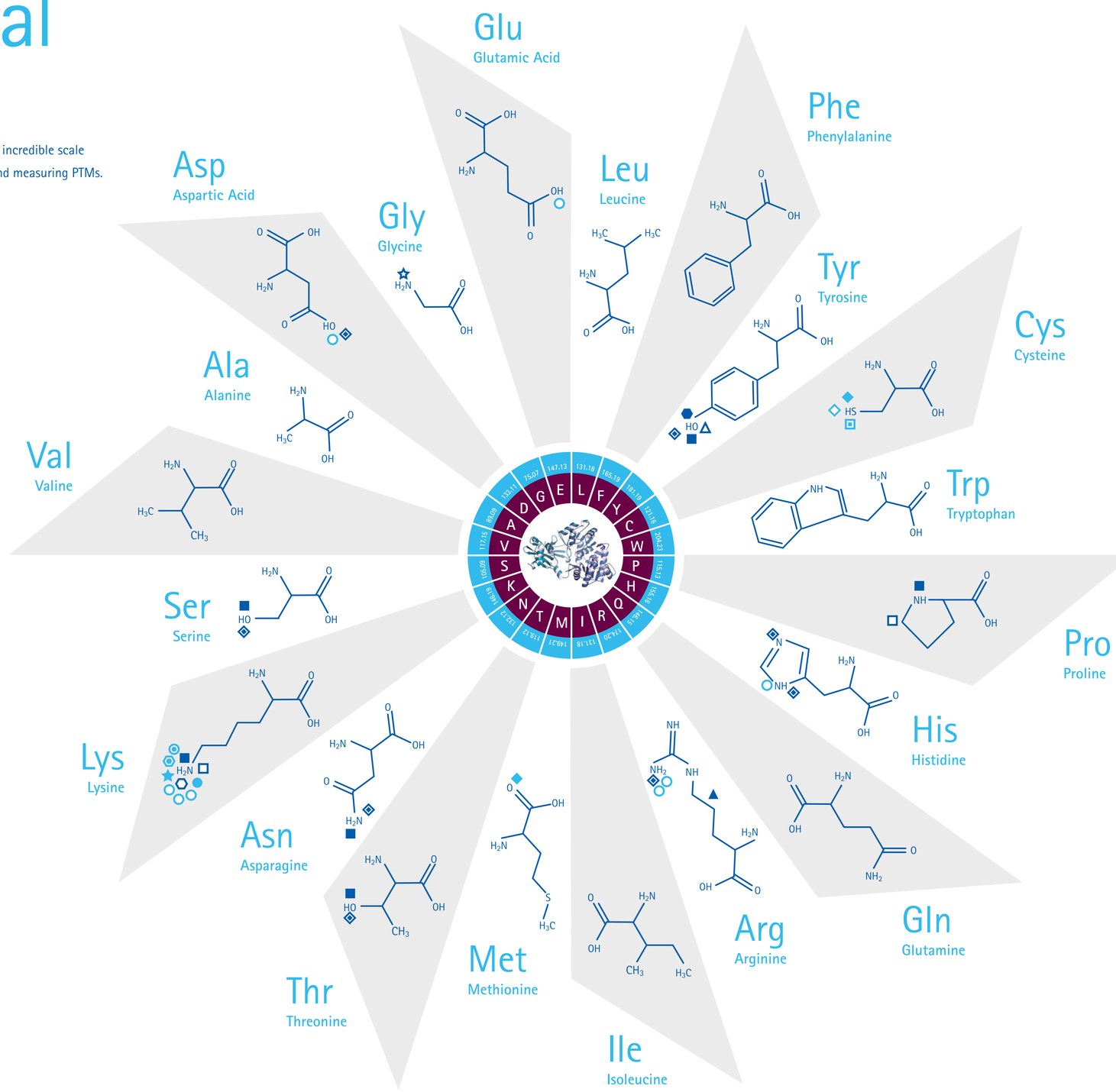
Immunoassays

From epigenetic modifications to phospho signaling, Merck Millipore's unique precision immunoassays, including the MILLIPLEX® MAP Cell signaling portfolio, allow you to investigate expression of intracellular total or phosphorylated proteins in multiple key signaling pathways simultaneously in the same sample.





The MILLIPLEX® MAP NF-κB Signaling Magnetic Bead Kit, 6-plex Kit (Cat. No. 48-630MAG) is one of our many Cell Signaling multiplex assay kits. This kit includes the following analytes: c-Myc (total), and phosphorylated FADD (Ser194), IKKα/β (Ser177/Ser181), IκBα (Ser32), NF-κB (Ser536), and TNFR1 (total).



Post-Translational Modifications	Change in Molecular Weight (Da)
Acetylation	42.0373
Citrullination or Deimination	<1
Crotonylation	68.0230
Farnesylation	204.3556
Glycosylation	Varies per MW of conjugated saccharide

Post-Translational Modifications	Change in Molecular Weight (Da)
Hydroxylation	15.9994
Methylation	14.0269
Myristoylation	210.3598
Neddylation	9072
Nitration	44.985
Oxidation	15.9994

Post-Translational Modifications	Change in Molecular Weight (Da)
Palmitoylation	238.23
Phosphorylation	79.9799
Sulfation	80.0624
Sumoylation	~12,000
Ubiquitination	114.043

Merck Millipore is a business of MERCK

www.merckmillipore.com