

PTMScan® Multi-Pathway Enrichment Kit

Quantitative Screening of Cellular Signaling

The PTMScan® Multi-Pathway Enrichment Kit #75676 enables quantitative proteomic screening of a defined set of protein sites and signaling nodes important for drug discovery, biomarker identification, and diagnostic development.

- Combine antibody enrichment of post-translationally modified (PTM) peptides with liquid chromatography mass spectrometry (LC-MS/MS) screening
- Identify and quantitatively profile >4000 unique proteoforms from >800 key proteins in a single experiment.
- Evaluate a large number of critical signaling pathways, including T Cell Receptor, Akt, MAPK, NF- κ B, Jak/Stat, and DNA damage/cell cycle.
- Limit the likelihood of missing important data points.
- Bridge the gap between discovery and targeted proteomics approaches.

The Multi-Pathway Enrichment Kit is based on the same technology and pathway panels as the PTMScan® Direct Multi-Pathway Service. The method employs multiplexed beads labeled with site-specific antibodies to defined targets within multiple known pathways of interest.

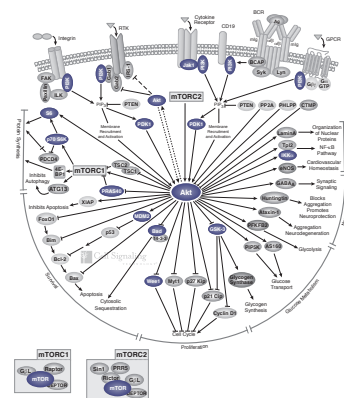
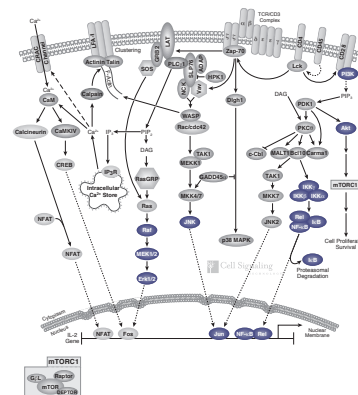


Coverage includes total and phosphorylated sites. This approach allows comprehensive mass spectroscopy-based analysis with reduced likelihood of missing important signaling pathways.

The PTMScan Multi-Pathway Enrichment Kit offers flexibility to identify signaling pathways across cell lines or experimental treatment and allows for customizable, targeted follow-up experiments. For example, a small number of samples may be run initially to narrow down the most abundant or relevant targets. The same kit can subsequently be used with a larger number of samples, focusing on the priority targets established in the first step.

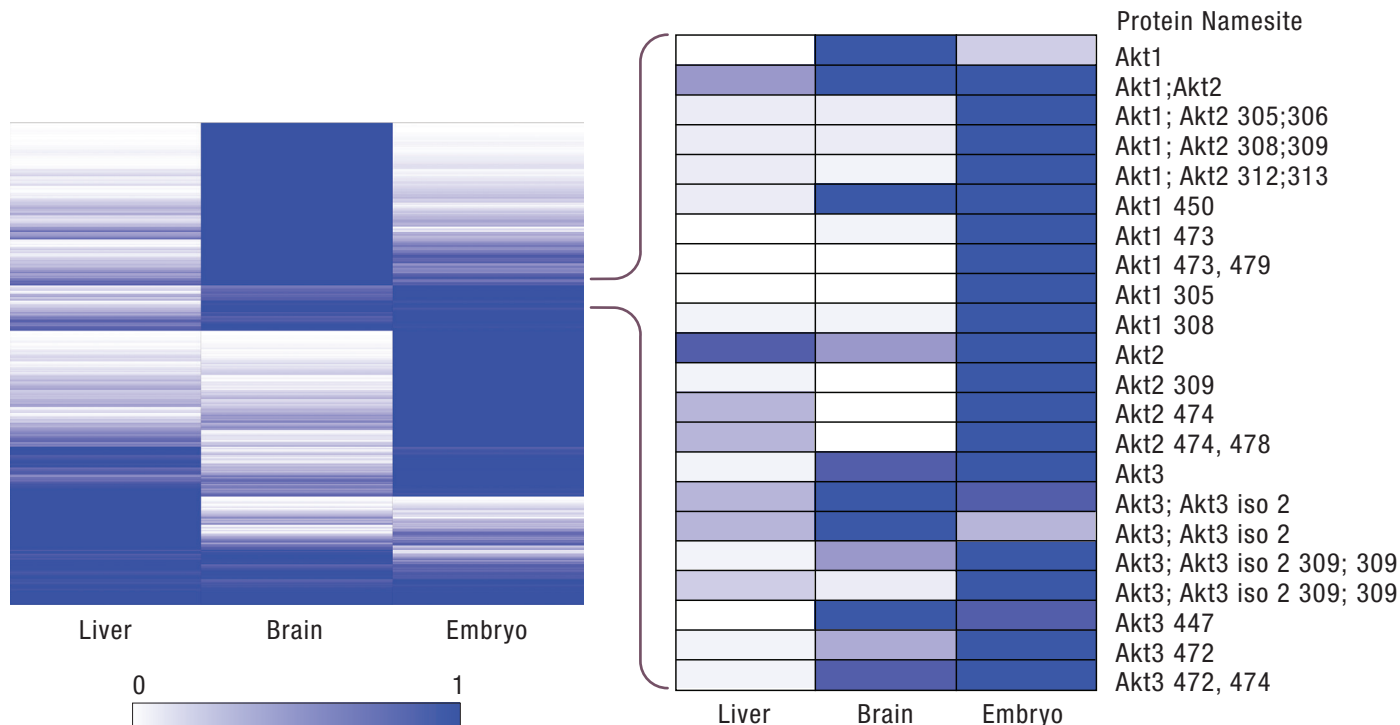
Pathway Coverage in the Multi-Pathway Enrichment Kit includes:

- Adherens Junction Dynamics
- AMPK Signaling
- B Cell Receptor Signaling
- Cell Cycle Control: G1/S Checkpoint
- Cell Cycle Control: G2/M DNA Damage Checkpoint
- ErbB/HER Signaling
- G protein-coupled Receptors Signaling to MAPK/Erk
- Insulin Receptor Signaling
- Jak/Stat Signaling: Il-6 Receptor Family
- Mitogen Activated Protein Kinase Signaling Cascades
- MAPK/Erk in Growth and Differentiation
- NF- κ B Signaling
- PI3 Kinase / Akt Signaling
- Regulation of Actin Dynamics
- Regulation of Microtubule Dynamics
- SAPK/JNK Signaling Cascades
- Signaling Pathways Activating p38 MAPK
- T Cell Receptor Signaling

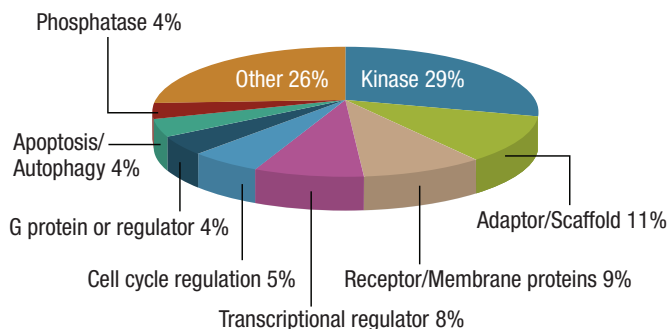


Examples of signaling pathways targeted by the PTMScan Multi-Pathway Enrichment Kit are shown at the top (text box). Two pathways, T Cell Receptor signaling (top) and AKT/PI3K pathway (bottom), are shown in detail as examples of pathway coverage by the reagents. The reagent targets proteins are highlighted in purple.

PTMScan® Multi-Pathway Enrichment Kit



Hierarchical clustering of relative abundance of peptides enriched using the PTMScan Multi-Pathway Enrichment Kit. Each row represents the results of a unique peptide against the tissue type. Data was calculated on a 0 (white, lowest abundance) to 1 (blue, highest abundance) scale.



Relative category distribution of proteins from peptides identified from LC-MS/MS experiments of human cancer cell lines using the PTMScan® Multi-Pathway Enrichment Kit.

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www.cellsignal.com/PTMmultipathway

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