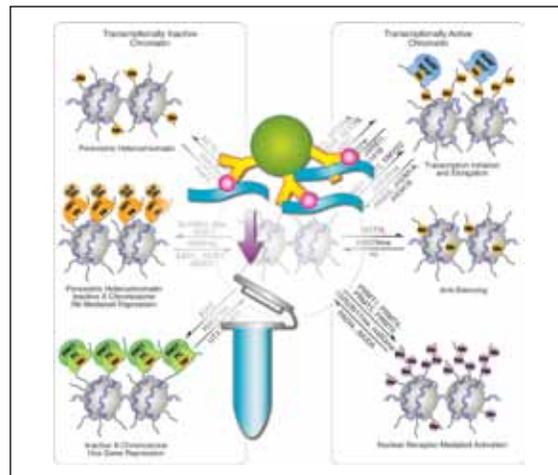


MethylScan® (Methylation Proteomics)

Step 1: MethylScan® Analysis

1. Experimental objectives and design consultation with scientists from Cell Signaling Technology (CST).
2. Determine samples and experimental parameters for study.
3. Methylated peptide immuno-affinity purification (IAP) with mono-methyl arginine antibody.
4. Tandem mass spectrometry (LC-MS/MS) analysis of enriched mono-methylated peptides for qualitative sequence and site identification.
5. Quantitative analysis of methylated peptide fold-change between study samples.



Step 2: MethylScan® Report and Consultation

1. MethylScan® report with qualitative and quantitative results.
2. Report contains sequence assignments in table format and detailed explanation of table contents and guidelines for data review.
3. Detailed discussion and review of report with CST scientists.
4. MethylScan® timeline: approximately 5 weeks; preliminary results delivery in 2-3 weeks; timeline will vary with project size.

MethylScan (Mono-Methyl-Arginine) SAMPLE RESULTS						
Table #1: Mouse Brain and Embryo; Trypsin Digest; Mono-Methyl-Arg Antibody (D5A12A3 & Me-R4-100)						
Samples: Sample 1 = Mouse Brain = CS13444, 13445; Sample 2 = Mouse Embryo = CS13450, 13451						
Legend: * - methylation, # - oxidized methionine, \$ - published site, Blue Text - CST antibody available, - - no Fold Change determined, Bold Intensity = manually reviewed						
Index	Index in Detail	Fold Change	Gene Name	Protein Name	Site	Description
13	1	Activator protein				
14	2	2				
15	3	Acceptor/stratome				
16	4	4	13.2	SOX4	316	protein kinase coreless
17	5	5	-0.5	Abi1; Abi1	109; 104	src interactor 1 isoform 1
18	6	6	-0.5	AKAP8	106	A-kinase anchor protein 8
19	7	7	-0.5	AKAP9	188	A-kinase anchor protein 9
20	8	8	-0.5	AKAP5	228	A-kinase anchor protein 5-like
21	9	9	-0.7	ANK1; Ank1	1684; 1670	ankyrin 1 isoform 1
22	10	10	0.6	ANK1; Ank1; Ank3; ANK3	292; 292; 293; 293	ankyrin 3, epithelial isoform 9
23	11	11	-0.5	Cks1b	18	clb ubiquitin-protein ligase subunit
24	12	12	-0.5	Cks1	58	adaptor molecule cks
25	13	13	-0.5	Dlgap3	522	disk large-associated protein 3
26	14	14	-0.5	Dlgap4; Digap4	132; 132	disk large-associated protein 4 isoform 1
27	15	15	-0.5	Dlgap4; Digap4	132; 132; 136; 136	disk large-associated protein 4 isoform 2
28	16	16	-0.5	Dlgap4; Digap4	290; 290	disk large-associated protein 4 isoform 3
29	17	17	-0.5	DYNBP	1097	dynamic-binding protein
30	18	18	-0.5	G3BP1	427	ras GTPase-activating protein-binding protein 1
31	19	19	-0.5	G3BP1	422; 433	ras GTPase-activating protein-binding protein 1
32	20	20	-0.5	G3BP1	433	ras GTPase-activating protein-binding protein 1
33	21	21	-0.5	G3BP1	445	ras GTPase-activating protein-binding protein 1
34	22	22	-0.5	G3BP1	445; 458; 464	ras GTPase-activating protein-binding protein 1
35	23	23	-0.5	G3BP1	445; 464	ras GTPase-activating protein-binding protein 1
36	24	24	-0.5	G3BP1	458	ras GTPase-activating protein-binding protein 1
37	25	25	-0.5	G3BP1	464	ras GTPase-activating protein-binding protein 1
38	26	26	-0.5	G3BP2; G3BP2	457; 424	ras GTPase-activating protein-binding protein 2 isoform 1
39	27	27	-0.5	GRASP	273	general receptor for phosphoinositides 1-associated scaffold protein
40	28	28	-0.7	LIM1; Lims1	1490; 950	LIM domain only 7
41	29	29	-0.5	PRC2	1158	multiple PRC2 domain protein
42	30	30	-0.5	PAR3-beta	1175	partitioning defective 3 homolog B