

SUNY UPSTATE MEDICAL UNIVERSITY PROTEOMICS CORE

Location:

SUNY Upstate Medical University
Weiskotten Hall Addition, Room 4303
750 East Adams Street
Syracuse, NY 13210

Contact Information:

David Kakhniashvili, Ph.D. (Director)
Office: WHA, room 9593
Phone: 464-4563
Email: kakhniad@upstate.edu

Website:

<http://www.upstate.edu/researchadmin/facilities/proteomics.php>

PROTEOMICS CORE SERVICES

Molecular Mass Determination

- Peptides
- Proteins

Protein Identification by Tandem Mass Spectrometry –LC/MS/MS

- Tryptic digestion of protein samples
 - in gel slices
 - in solution
- LC/MS/MS analysis –acquisition of raw MS data followed by database search for protein identification

Mapping of Specified Post Translational Modifications (PTMs)

- Tryptic digestion of protein samples
 - in gel slices
 - in solution
- LC/MS/MS analysis –acquisition of raw MS data followed by database search for protein identification and mapping of specified PTMs (e.g. phosphorylation, methylation, etc.)

Protein Profiling

- cICAT (Cleavable Isotope Coded Affinity Tags) analysis
 - cICAT labeling kit (Applied Biosystems), the manufacturer's protocol
- iTRAQ (Isobaric Tag for Relative and Absolute Quantification) analysis
 - iTRAQ labeling kit (Applied Biosystems), the manufacturer's protocol
- 2-D DIGE (2-D Fluorescence Difference Gel Electrophoresis) analysis
 - Minimal labeling kit (GE Healthcare), the manufacturer's protocol, 24 cm gels

PROTEOMICS CORE

Instrumentation:

1. LTQ Orbitrap XL mass spectrometer (Thermo Fisher Sci.)
2. Q-TOF Micro mass spectrometer (Waters)
3. Typhoon 9410 variable imager (GE Healthcare)
4. Ettan Spot Picker (GE Healthcare)
5. 2-D DIGE – 2-D Fluorescence Difference Gel Electrophoresis
IPGphor 3 (GE Healthcare) – I dimension
Ettan DALTsix (GE Healthcare) – II dimension

Project consultation and technical assistance are available from Core director

PRICING

Application	Fees, \$\$	
	Upstate	Others Non-profit
1. Consulting	50.00 per hour	60.00 per hour
2. Molecular Weight Determination		
Peptide or protein samples Syringe infusion	50.00 per sample	60.00 per sample
3. Protein Identification		
LC/MS/MS analysis of digested samples	180.00 per run	220.00 per run
Trypsin digestion of proteins in solution + LC/MS/MS analysis	100.00 (set-up) + 200.00 per sample	120.00 (set-up) + 245.00 per sample
In-gel trypsin digestion of protein bands + LC/MS/MS analysis	150.00 (set-up) + 200.00 per band	175.00 (set-up) + 245.00 per band
4. Mapping of Specified PTMs		
LC/MS/MS analysis of digested samples for protein identification and mapping of specified PTMs	180.00 per run + 20.00 per PTM	220.00 per run + 25.00 per PTM
Trypsin digestion of proteins in solution + LC/MS/MS analysis for protein identification and mapping of specified PTMs	100.00 (set-up) + 200.00 per sample + 20.00 per PTM	120.00 (set-up) + 245.00 per sample + 25.00 per PTM
In-gel trypsin digestion of protein bands + LC/MS/MS analysis for protein identification and mapping of specified PTMs	150.00 (set up) + 200.00 per sample + 20.00 per PTM	175.00 (set up) + 245.00 per sample + 25.00 per PTM

PRICING (continued)

5. cICAT Protein Profiling	Fees, \$\$	Fees, \$\$
LC/MS/MS differential protein expression analysis of cICAT labeled samples	200.00 per run	250.00 per run
cICAT labeling of 2 protein samples +	350.00 per run	400.00 per run
LC/MS/MS differential protein expression analysis of cICAT labeled samples		
6. iTRAQ Protein Profiling		
LC/MS/MS differential protein expression analysis of iTRAQ labeled samples	200.00 per run	300.00 per run
iTRAQ labeling of protein samples +		
LC/MS/MS differential protein expression analysis of iTRAQ labeled samples		
2-plex (2 samples)	500.00 per run	600.00 per run
3-plex (3 samples)	675.00 per run	800.00 per run
4-plex (4 samples)	850.00 per run	1000.00 per run
7. Protein Profiling by 2-D DIGE		
Cy3/Cy5 labeling of two samples per 2-D gel (including minimal labeling, 2-D electrophoresis, gel imaging, protein ratios in 2-D spots)	600.00 per gel	700.00 per gel
Cy2/Cy3/Cy5 labeling of three samples per 2-D gel (including minimal labeling, 2-D electrophoresis, gel imaging, protein ratios in 2-D spots)	650.00 per gel	750.00 per gel
Comparative analysis of multiple 2-D gel images with the same reference (Cy2/Cy3/Cy5 labeling)	200.00 per gel	200.00 per gel
2-D gel electrophoresis for spot picking (including Sypro Ruby staining, gel image, image match to master image and gel spot pick list)	450.00 per gel	550.00 per gel
Spot picking	5.00 per spot	10.00 per spot
In-gel trypsin digestion of protein spots	150.00 (set-up) + 20.00 per spot	175.00 (set-up) + 25.00 per spot
LC/MS/MS analysis for protein identification in gel spots	180.00 per run	220.00 per run