

Proteomics Services@Xcelris

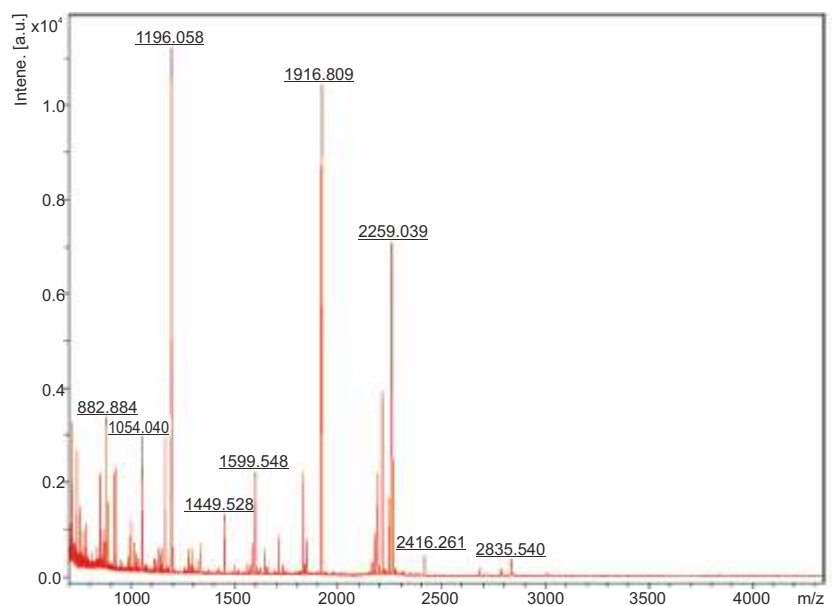
Proteomics is emerging as a powerful science, as researchers are now interested in studying the structure and functions of various proteins as well as the interaction between them. With the growing emphasis on protein studies, Xcelris announces the launch of Proteomics services on advanced Bruker Autoflex MALDI-TOF platform. We offer advanced technical services which would help researchers for structural characterization of biomolecules such as proteins and peptides.

2-D Gel Electrophoresis and Spot Identification

We offer high-throughput, two-dimensional gel electrophoresis which is an excellent method for fractionation of complex mixture of proteins into discrete components and for study of differential protein expression. Spots obtained on gels correspond to different proteins and are isolated and subjected to enzymatic digestion for further mass spectrometer analysis. We offer 2-D gel electrophoresis of crude/purified protein on IPG strips of 3-10 pH (17 cm and 11 cm), 5-8 pH (17cm) with spot identification on MALDI-MS

Peptide Mapping

Peptide mapping identifies protein on the basis of unique peptides produced by each individual protein. Chemical or enzymatic treatment of protein results in formation of peptide fragments followed by separation and identification of the fragments in a reproducible way. It is a powerful test that is capable of identifying single amino acid changes resulting from events such as errors in the reading of complementary DNA sequences or point mutations.



Multiple Spectra Report

Molecular Weight Analysis

Accurate mass determination is the key for identification of wide range of samples from small organic molecules, intact glycoprotein and unambiguous proteins. Mass spectrometry offers accurate measurement over a range of molecular weight with minimum sample consumption. Potential modification indicates difference between the theoretical and measured molecular weight.

Oligonucleotide analysis

MALDI-TOF analyze the molecular weight of synthetic oligonucleotide (up to 75-mers). The mass determination of the oligos offer information on the degree of purity of the sample.

Rapid Microbial Identification using MALDI Biotyper

Microbial Identification by MALDI Biotyper enables species-specific identification of microorganisms, like bacteria, yeast and fungi. The identification method measures constantly expressed highly abundant proteins i.e ribosomal proteins, which produce remarkable reproducibility.

Sample Submission

| Cat No. | Services | Sample type | Sample requirement | Deliverables |
|------------|--|--|--|--|
| ProX-Iso | Protein isolation and Clean-up | Intact protein | Crude protein | Isolated protein |
| ProX-2D-11 | 2D-Electrophoresis (IEF+SDS-PAGE) for 11cm pH 3-10/5-8 | Intact protein | 50 mg of protein (crude or purified) | Gel analysis with detailed report |
| ProX-2D-17 | 2D-Electrophoresis (IEF+SDS-PAGE) for 17cm pH 3-10/5-8 | Intact protein | 50 mg of protein (crude or purified) | |
| ProX-Spot | Spot Identification of Protein | | No of spots to be specified by clients | Detailed report of Spot identification |
| ProX-MWA | Molecular Weight Analysis (MWA) | Intact protein in solution | 1-5 mg/ml | Felx Analysis report in pdf file format, Mass list in excel file format, Spectrum image in .jpg file format, Raw spectrum in mzXML file format |
| ProX-PMF | Peptide Mass Fingerprinting with MALDI MS/MS | Protein of interest in Gel(CBB or Silver Stain) or in solution | In Gel: >100ng In-solution: 1mg/ml | |
| ProX-OA | Oligonucleotide Analysis | Oligonucleotide (10-40mer) | 5µl@50-100 ng /µl conc. | |
| ProX-MID | Microbial Identification | Pure Culture | Pure culture plates or cell pellets | |