

Differential Protein Expression Analyses

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Differential protein expression analyses, 6 hour minimum (\$282 internal, \$360 external) per project.

1. Peptide hits validation

Validate the peptide hits returned by the mass-spectrometry peptide identification algorithms

- **Deliverables:**
 - reports generated by peptideProphet
- **Tools Used:**
 - **peptideProphet:** (<http://peptideprophet.sourceforge.net>) used to validate peptide hits:
 - pepXML output file that has list of validated peptide hits.

2. Protein hits validation

Validate the protein hits using the pepXML peptideProphet output

- **Deliverables:**
 - reports generated by ProteinProphet
- **Tools Used:**
 - **ProteinProphet:** (<http://proteinprophet.sourceforge.net>) used to identify high-confident protein hits
 - protXML output file that has list of validated protein hits.

3. Differential protein expression analyses

Identify differentially expressed proteins as well as absolute protein counts

- **Deliverables:**
 - Excel file that has list of differentially expressed proteins (for more than 1 sample) or just absolute protein counts (for a single sample)
- **Tools Used:**
 - **APEX:** (http://www.marcottelab.org/APEX_Protocol/)
 - List of differentially expressed proteins

Note: This analysis needs peptide/protein hit lists from mass-spectrometry search algorithm run on raw-data. If this is not available, we can do this for you. Please see [Protein Identification and Validation](#).