

iTRAQ® Reagents

The iTRAQ® Reagents, including the new iTRAQ Reagents – 8plex, are amine-specific, stable isotope reagents that can label all peptides in up to eight different biological samples, enabling simultaneous identification and quantitation, both relative and absolute, while retaining important PTM information.

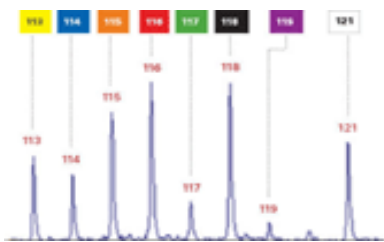
- Simultaneously identify and quantify proteins from multiple samples.
- Expands protein and proteome coverage by labeling all peptides, including those with post-translational modifications (PTMs).
- Increases confidence in identification and quantitation from MS/MS spectra by tagging multiple peptides per protein.
- Increases throughput and confidence in results for protein biomarker discovery studies.
- Offers a simple workflow without sample fractionation for reduced-complexity samples, such as affinity pull-downs.
- Provides the flexibility to multiplex up to eight different biological samples simultaneously in a single experiment.
- Fully supported by ProteinPilot™ 2.0 software on all Applied Biosystems/MDS SCIEX proteomics LC/MS/MS platforms

Innovation in Peptide-Tagging Chemistry

Applied Biosystems iTRAQ® Reagents are an isobaric peptide tagging technology that enable you to label all primary amines, regardless of peptide class. Because you do not lose important information, such as PTMs, this tagging system allows you to extract more detailed information from your samples.

Figure 1:

iTRAQ® Reagent-8Plex
Protein Quantitation



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The ability to analyze up to eight different samples simultaneously gives you even more experimental-design flexibility. Multiplexing enables you to compare numerous sample states and provides the flexibility to run duplicates and triplicates. MS/MS fragmentation of peptides labeled with iTRAQ® Reagents – 8plex results in cleaner spectra with increased signal, giving higher confidence in peptide identifications. And the tagging and analysis of multiple peptides per protein further improves the confidence of protein identification.

Higher Throughput Protein Biomarker Discovery

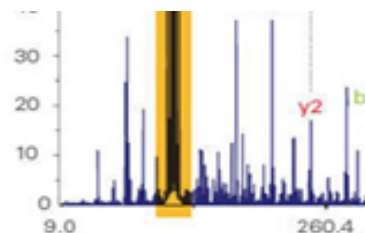
Obtain protein identification and quantitation simultaneously in up to 8 samples at a time for higher throughput biomarker discovery. The straightforward iTRAQ Reagent workflow has less rigorous chromatography demands than non-labeling approaches and provides high confidence results. And contrary to label-free profiling approaches, iTRAQ Reagents are completely compatible with fractionation strategies that allow you to 'dig deeper' and get to lower abundant proteins

Experimental Flexibility with Confident Identifications

The ability to analyze up to eight

Figure 2:

iTRAQ® Reagent-8Plex
Protein Identification



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Solutions for Quantitative Biology

Whether you are performing relative or absolute quantitation, Applied Biosystems iTRAQ® Reagents – 8plex, MS instruments, and application software provides an integrated solution with the ease, the flexibility, and the confidence in protein quantitation and identification you need for quantitative biology. These reagents are ideal for many applications including pull-downs, membrane protein studies, discovery and validation analysis for biomarker elucidation, and absolute quantitation of target proteins of interest. The reagents are compatible with most mass spectrometers, but are optimized on Applied Biosystems/MDS SCIEX instruments

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