



## MULTIPLEXED DILEU-BIOTIN-AZIDE (DBA) TAG ENABLED ISOBARIC TANDEM ORTHOGONAL PROTEOLYSIS ACTIVITY-BASED PROTEIN PROFILING (ISOBOP-ABPP) PLATFORM FOR HIGH-THROUGHPUT QUANTITATIVE PAN-PTM ANALYSIS

[View U.S. Patent Application Publication No. US-2024-0036055 in PDF format.](#)

**WARF: P220286US02**

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### The Invention

UW-Madison researchers have developed a set of novel isobaric chemical tags, DiLeu-Biotin-Azide (DBA), that could be useful in proteomics, particularly quantification of post translational modifications (PTMs). The multiplex DBA tags consist of three “modules”: (1) a DiLeu reporter group for relative quantification using MS/MS; (2) a biotin moiety for selective enrichment via streptavidin beads; and (3) an azide functional group to enable biorthogonal click chemistry. When combined with specific alkyne probes, the trifunctional structure can introduce isotopic labels onto a protein/peptide at the site of a PTM. Once introduced, the biotin functionality allows for selective enrichment of the labeled/tagged protein. The invention includes both cleavable (cDBA) and non-cleavable versions (DBA).

### Additional Information

#### For More Information About the Inventors

- [Lingjun Li](#)

#### Tech Fields

- [Analytical Instrumentation, Methods & Materials : Mass spectrometry](#)
- [Analytical Instrumentation, Methods & Materials : Reagents](#)
- [Research Tools : Genomics & proteomics](#)

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