

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

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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

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## **Tech Fields**

- · Analytical Instrumentation, Methods & Materials: Mass spectrometry
- Analytical Instrumentation, Methods & Materials: Reagents
- Research Tools: Genomics & proteomics

For current licensing status, please contact Jennifer Gottwald at  $\underline{jennifer@warf.org} \text{ or } 608\text{-}960\text{-}9854$ 



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