INOMIXO Inc.

Biomarker quantification by LC/MS

CUTTING-EDGE OMICS FOR YOUR RESEARCH

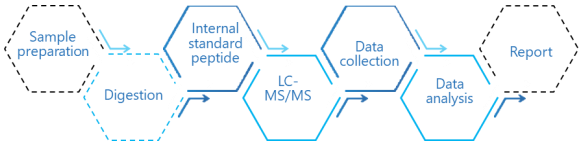
Introduction

Biomarker quantification by LC/MS involves the precise measurement of specific molecules or substances within biological samples. LC separates the components of a sample, while MS detects and quantifies these components based on their mass-to-charge ratio. This method enables highly sensitive and accurate analysis, making it invaluable in clinical diagnostics, pharmaceutical research, and various other fields where precise biomarker measurement is essential for understanding disease mechanisms, drug efficacy, and patient responses.

Our target protein quantification service

At INOMIXO, our specialized service primarily offers protein quantification utilizing LC/MS to identify and quantify target proteins through protein-specific peptide. Compared to traditional methods like Western blot and ELISA, our LC/MS-based protein quantification service offers several advantages. It bypasses the need for antibodies while maintaining exceptional specificity. Moreover, it boasts high throughput, especially when combined with MRM/PRM techniques, allowing for simultaneous quantification of multiple target proteins in a single experiment. Additionally, our technique provides a wide quantification range, accommodating both low-abundance and high-abundance proteins effectively.

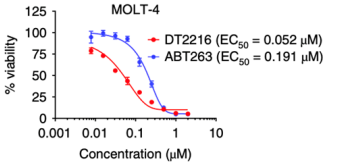
Project workflow

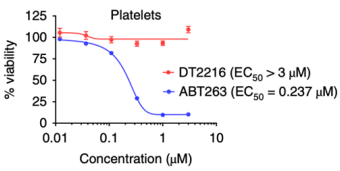


Application

1. PROTAC mediated degradation of target proteins

PROTAC usually degrades target proteins efficiently, and target concentrations are usually monitored by immunoaffinity methods due to the high sensitivity and low target concentration after degradation. However, this method is not always effective, in some cases, the binding between the antibody and the target may be interfered by other proteins, resulting in the inability to accurately quantify the target protein. In this case, LCMS/MS or immunoaffinity enrichment coupled with LCMS/MS can be considered for accurate quantification of the target protein.





Thermo Scientific™ Orbitrap Exploris™ 480

From Khan, S., et al. A selective BCL-XL PROTAC degrader achieves safe and potent antitumor activity. Nat Med 25, 1938–1947 (2019).

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