QconCATs for absolute protein quantification with mass spectrometry

Mass Spectrometry (MS) is a very attractive cost-efficient method to obtain information on a large number of proteins in any sample, for example blood serum, cell lysates or body fluids. Unfortunately, the relationship between a mass spectrometric signal and the amount of the underlying protein is not linear; therefore MS analysis provides no quantitative statements. Nevertheless absolute quantification is now possible with our patented QconCAT technology.

PolyQuant GmbH offers custom-made reference standards for quantification of proteins by mass spectrometry. With the help of a QconCAT reference standard, an exact amount of a number of target proteins can be detected in a single MS run. This approach makes mass spectrometry an efficient quantitative method.

QconCAT technology can be applied to various fields of research like biomarker research and validation, drug discovery and toxicology, diagnostics, clinical studies, food safety and quality control, proteomics and systems biology. Each QconCAT will contain carefully selected and isotope labelled peptide standards for 10-50 target proteins that can be used immediately in the MS analysis.

A key aspect of the QconCAT reference standard is extensibility: QconCATs can be used with others, but also with single reference peptides, which can be supplemented by chemical synthesis in a few days. The QconCAT technology can easily be combined with other MS-based methods, such as AQUA, iTRAQ and iCAT. This in particular means that MS-users can without effort integrate QconCATs into existing workflows.

Being a concatamer, the QconCAT technology is also advantageous as it allows the generation of peptides which are difficult to produce by chemical synthesis. Furthermore, the proteotypic peptides are released in a 1:1 ratio, which eliminates variations derived from solubility problems of synthetic peptides.

Custom-made QconCATs are available worldwide from PolyQuant GmbH. Based on a detailed analysis of your requirements we will provide you with the ideal QconCAT for your protein quantification project.

For more information please visit our website or contact us at the address below.
About the PolyQuant GmbH:

PolyQuant offers a range of products and services for proteomics and pharmaceutical industry based on an innovative platform technology of absolute quantification of proteins. The QconCAT technology allows multiplex quantitative analysis of a large number of proteins and can be established within just a few weeks. PolyQuant also offers a full service of protein analysis in any samples like cell extracts or blood serum. Protein quantification could also be easily established by customers in-house. An attractive licensing option enables integration of technology into customers’ large projects.

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