

QUANTIFICATION OF MONOCLONAL ANTIBODIES USING MASS SPECTROMETRY

#### **ABOUT PROMISE PROTEOMICS**

Promise Proteomics is a medtech company based in France, which provides a high level of expertize, products and solutions in quantitative proteomics.

Promise Proteomics is dedicated to both the measurement of mAbs concentrations in biological fluids using mass spectrometry, as well as the custom production of labelled proteins or mAbs of choice.

Promise Proteomics helps customers all around the world achieve reliable and accurate results when using mass spectrometry.

#### **OUR RANGE OF PRODUCTS**

Regarding quantification of monoclonal antibodies in biological fluids, Promise Proteomics has developed a range of solutions to address the needs of bioanalytical scientists. The solutions presented below are for research use only, not for use in diagnostic procedures.

Our stable-isotopically labelled monoclonal antibodies (SIL-mAbs) are used as internal standards in quantification assays. They are produced in our ISO9001 certified facility in Grenoble, France. All our SIL-mAbs are produced in mammalian cells, with dedicated tools and processes to ensure high isotopic incorporation (>98%), high purity (>95%) and stability.

See the list of our SIL-mAbs page 4

Our mAbXmise kits are complete ready-to-use solutions for facilitating the quantification of monoclonal antibodies using mass spectrometry in the laboratory. SIL-mAbs are incorporated in our mAbXmise kits for ensuring quantification performances. The solution provided enables to perform the pre-analytical steps before LC-MS analysis, and is compatible with most of the LC-MS configurations and brands. To ensure a satisfying experience, technical support is provided and our application team will be at your side during the implementation phase.

See our portfolio of mAbXmise kits pages 6 & 7

The Promise Proteomics In Vitro diagnostic portfolio is not registered in the United States. For information on availability, please contact us at contact@promise-proteomics.com. Trademarks are the property of Promise Proteomics.

# WHY USE STABLE ISOTOPE LABELLED MONOCLONAL ANTIBODIES ?

A stable isotope labelled (SIL) form of an analyte protein is widely regarded as the optimal internal standard<sup>1</sup> for absolute quantification of proteins using LC-MS.

SIL-mAbs correct bias (due to losses, incomplete digestion, adsorption, proteolysis...) occuring during the preparation and analytical workflow. With SIL-mAbs, the accuracy and reproducibility of your quantification data is improved.

#### This product could be used for:

- · Pharmacokinetics studies
- Research and Discovery/pre-clinical/clinical drug development
- 1. Faria, M., & Halquist, M. S. (2018). Internal standards for absolute quantification of large molecules (Proteins) from biological matrices by LC-MS/MS. Dans InTech eBooks. https://doi.org/10.5772/intechopen.75569

#### CHARACTERISTICS

- Full length recombinant monoclonal antibodies
- Isotopic incorporation (>98%) and purity (>95%)
- 13C15N isotope labelling on Arg and Lys residues
- Expression systems CHO or HEK



#### OFF-THE-SHELF SIL MONOCLONAL ANTIBODIES

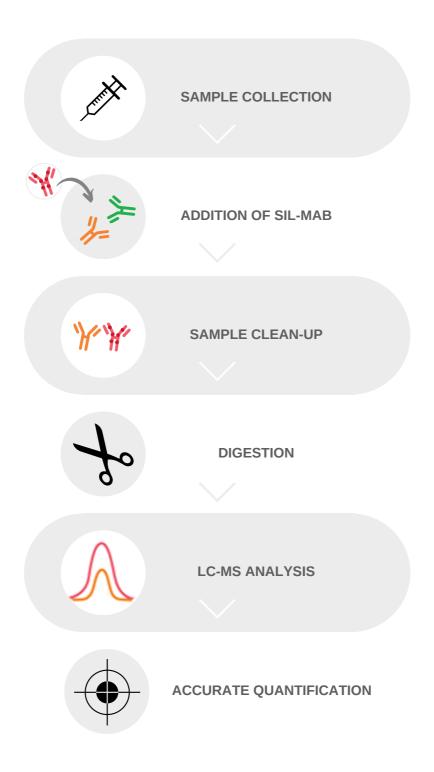
STABLE ISOTOPE LABELLED PRODUCT REFERENCE **MONOCLONAL ANTIBODY** ORF90261 **Abatacept** Adalimumah HUU05211 **Avelumab** BAH92571 AVZ10161 **Bevacizumab Upon request Belatacept** ERX08221 Cetuximab COZ13241 Concizumab **Daratumumab** DAU05201 DUU08301 **Dupilumab** IMU05501 Durvalumab **Eculizumab** SOZ11141 **Emicizumab** HEH95561 ENF90251 **Etanercept** Golimumab SIU05281 TRU05271 Guselkumab **REX08151 Infliximab Ipilimumab** YEH92271 **Ixekizumab** TAZ13261 OPH95701 **Nivolumab** GAH92161 **Obinutuzumab Pembrolizumab** KEH95331 Pertuzumab PEZ10191 Risankizumab SKZ10121 RIX08221 Rituximab Secukinumab COH92201 Tocilizumab ACH92241 **Trastuzumab** HEZ10231 **Ustekinumab** STU05261 Vedolizumab **ENZ10211** 

#### Is your SIL-mAb of interest not listed?

For 10 years, Promise Proteomics offers customized bioproduction options.

Contact us for further information.

#### SIL MONOCLONAL ANTIBODIES WORKFLOW



Unlike the use of SIL-peptides, full-length labelled antibodies are processed along with the target analytes throughout the pre-analytical and LC-MS workflows thus improving robustness and quality of the quantitative data.

#### **MABXMISE KITS**



# KITS TO MEASURE BLOOD CONCENTRATION OF THERAPEUTIC MONOCLONAL ANTIBODIES

The mAbXmise quantification kit is developed to measure the concentration of therapeutic monoclonal antibodies (mAbs) in preclinical or clinical samples. The kit is a quantitative assay. The test can be performed on plasma (EDTA, heparin or citrate collection tubes) and serum. 20µg of sample are needed per wells.

#### **INCLUDED IN EACH KIT**

- 96-well plate coated with stable labelled mAbs (internal standards)
- 6 calibrators (CAL)
- 2 Quality Control samples (QC)
- Relevant buffers and solutions
- Specific consumables
- Protease
- LC-MS method and application support

### MABXMISE KITS

## QUANTIFICATION KITS ALREADY AVAILABLE

MONOCLONAL ANTIBODY	PRODUCT REFERENCE							MEASURING
	OTDM1	ITDM1	ITDM2	GTDM	HTDM	PHTDM	IADA1	RANGE
Bevacizumab	<b>Ø</b>							2-100μg/mL
Rituximab								2-100μg/mL
Cetuximab								2-100μg/mL
Trastuzumab								2-100μg/mL
Nivolumab								2-100μg/mL
Pembrolizumab								2-100μg/mL
Ipilimumab								2-100μg/mL
Infliximab								2-100μg/mL
Adalimumab								2-100μg/mL
Obinutuzumab								2-100μg/mL
Secukinumab								2-100μg/mL
Tocilizumab								2-100μg/mL
Ustekinumab								0.5-100μg/mL
Vedolizumab								2-100μg/mL
Abatacept								1-100µg/mL
Belatacept								1-100µg/mL
Emicizumab								5-100μg/mL
Eculizumab								5-100µg/mL
Ravulizumab								5-100μg/mL
ANTI-Infliximab								20-400ng/mL
ANTI-Adalimumab								10-200ng/mL



# PROMISE PROTEOMICS SAS 7, parvis Louis Néel • BHT 52 A • CS 20050 - 38040 Grenoble Cedex 9 • FRANCE Phone +33 4 38 02 36 50 RCS Grenoble B 433 546 504

#### contact@promise-proteomics.com

