Cambridge Isotope Laboratories, Inc.
**isotope.com**

MRM Proteomics
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**RESEARCH PRODUCTS**

# PeptiQuant™ Plus Quality Control Kits

## For Targeted and Untargeted Proteomics


**Cambridge Isotope Laboratories, Inc. is pleased to offer PeptiQuant™ Plus quality control (QC) kits for performance assessment of targeted (or untargeted) plasma proteomic workflows.** The daily QC kit is intended for routine LC-MS/MS performance checks, while the workflow QC kit is designed to measure the quality of one type of bottom-up LC-MS/MS method. It should be noted that the utilized workflow is the same as that employed in the PeptiQuant Plus Biomarker Assessment Kits (BAKs),[1,2] which could enable their parallel usage. As with the BAKs, these QC kits are optimized for platform-dependent operation (see table below for current offerings), with a condensed panel of 35 peptides (one peptide/protein) monitored per kit for rapid QC analysis. All assays have been validated according to the CPTAC (Clinical Proteomic Tumor Analysis Consortium) guidelines, with their characterization results uploaded to the CPTAC Assay Portal[3] for reference.

| Kit Type | Platforms Available | | |
|---|---|---|---|
| | Agilent 6490/6495 | Sciex QTRAP® 6500 | Thermo Scientific™ Q Exactive™ Plus |
| Daily QC | ■ | ■ | ■ |
| Workflow QC | ■ | ■ | ■ |

The daily QC kits are available for 10, 20, and 50 injections.
The workflow QC kits are available for 1 and 2 runs.

**Note:** Please inquire if an alternate LC-MS/MS platform or alternate kit number (i.e., for daily injection or workflow run) is desired.

### Features and Benefits

- CPTAC-certified assays
- SIS and NAT peptides for each target protein
- Rapid performance evaluation of LC-MS/MS platform and/or analytical workflow
- Reduces development time and cost

### Kit Contents

- Starting materials (lyophilized), with all five vials utilized in the workflow QC kit (for one analytical run) and vial 1 only in the daily QC kit (enables five injections):
  - **Vial 1** (red cap): SIS peptide mix for spiking into standard curve, QC, and experimental sample digests
  - **Vial 2** (clear cap): NAT peptide mix for spiking into standard curve and QC sample digests
  - **Vial 3** (purple cap): TPCK-treated trypsin (1 mg/mL after 100 mM Tris pH 8.0 addition)
  - **Vial 4** (green cap): BSA (10 mg/mL after PBS addition)
  - **Vial 5** (blue cap) Human plasma
- USB containing user manual, guideline performance values, acquisition method (for given instrument platform), and Skyline analysis file

### References


1. Percy, A.J.; Borchers, C.H. **2021**. Detailed method for performing the ExSTA approach in quantitative bottom-up plasma proteomics. *Methods Mol Biol, 2228,* 353-384.
2. Gaither, C.; Popp, R.; Mohammed, Y.; et al. **2020**. Determination of the concentration range for 267 proteins from 21 lots of commercial human plasma using highly multiplexed multiple reaction monitoring mass spectrometry. *Analyst, 145(10),* 3634-3644.
3. Whiteaker, J.R.; Halusa, G.N.; Hoofnagle, A.N.; et al. **2014**. CPTAC Assay Portal: a repository of targeted proteomic assays. *Nat Methods, 11(7),* 703-704.


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# PeptiQuant Plus QC Panel

## Human Plasma QC Kit

| Protein | Uniprot Acc. |
|---|---|
| Adiponectin | Q15848 |
| Afamin | P43652 |
| α-1-acid glycoprotein 1 | P02763 |
| α-1-antichymotrypsin | P01011 |
| α-1-antitrypsin | P01009 |
| α-2-antiplasmin | P08697 |
| α-2-macroglobulin | P01023 |
| Antithrombin-III | P01008 |
| Apolipoprotein A-I | P02647 |
| Apolipoprotein A-IV | P06727 |
| Apolipoprotein B-100 | P04114 |
| Apolipoprotein E | P02649 |
| Attractin | O75882 |
| β-2-glycoprotein 1 | P55058 |
| Carbonic anhydrase 1 | P00915 |
| CD5 antigen-like | O43866 |
| Clusterin | P10909 |
| Complement C1r subcomponent | P32119 |

| Protein | Uniprot Acc. |
|---|---|
| Complement C3 | P01024 |
| Complement component C9 | P02748 |
| Complement factor B | P00751 |
| Fibrinogen γ chain | P02679 |
| Fibulin-1 | P23142 |
| Haptoglobin | P00738 |
| Hemoglobin subunit α | P69905 |
| Hemopexin | P02790 |
| Heparin cofactor 2 | P05546 |
| Hyaluronan-binding protein 2 | Q14520 |
| Inter-α-trypsin inhibitor heavy chain H2 | P19823 |
| Kininogen-1 | P01042 |
| Pigment epithelium-derived factor | P36955 |
| Plasminogen | P00747 |
| Serotransferrin | P02787 |
| Serum albumin | P02768 |
| Vitronectin | P04004 |