



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 Portal³ 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.

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*, doi: 10.1007/978-1-0716-1024-4.
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.

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 ("S" on 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

Continued ➤

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

