

PolyQuant's CVD Kit provides 211 reference peptides for absolute protein quantification of 47 plasma proteins linked to cardiovascular diseases. The kit is designed for application in human, mouse and rat samples, by using peptides that are shared between all three organisms. The peptides are grouped according to plasma protein expression levels onto four individual QconCAT proteins.

The protein panel includes biomarker proteins enabling the determination of the risk for developing cardiovascular diseases, but can also be adapted for other diseases. It can be easily combined with additional standards for other proteins of interest.

### Use case:

#### [Targeted LC-MS/MS for the evaluation of proteomics biomarkers in the blood of neonates with necrotizing enterocolitis and late-onset sepsis](#) *Analytical and Bioanalytical Chemistry 2018*

Chatziioannou et al. used a subset of PolyQuant's CVD kit and some additional proteins of interest. They were able to define two panels of three proteins each that allow highly sensitive diagnosis of late-onset sepsis (LOS) and differential diagnosis between LOS and necrotizing enterocolitis.

### Kit content (for 200 applications):

Component	Amount	Description
PQ-CVD-1		QconCAT for high expressing proteins
PQ-CVD-2		QconCAT for medium expressing proteins
PQ-CVD-3		QconCAT for low expressing proteins
PQ-CVD-4		QconCAT for low expressing proteins
RePLiCal		Calibration standard for retention time normalization

### Protein list:

QconCAT ID	Protein	Gene	Swissprot ID			No of peptides
			Human	Mouse	Rat	
PQ-CVD-1	Apolipoprotein A-I	APOA1	P02647	Q00623	P04639	4
PQ-CVD-1	Apolipoprotein B-100	APOB	P04114	E9Q414	Q7TMA5	3
PQ-CVD-1	Clusterin	CLU	P10909	Q06890	P05371	8
PQ-CVD-1	Apolipoprotein D	APOD	P05090	P51910	P23593	4
PQ-CVD-1	Pregnancy zone protein	PZP	P20742	Q61838	Q63041	4
PQ-CVD-1	Alpha-2-macroglobulin	A2M	P01023	Q6GQT1	P06238	4
PQ-CVD-1	Apolipoprotein A-II	APOA2	P02652	P09813	P04638	4
PQ-CVD-1	Apolipoprotein E	APOE	P02649	P08226	P02650	5
PQ-CVD-1	Retinol-binding protein 4	RBP4	P02753	Q00724	P04916	4
PQ-CVD-1	Apolipoprotein C-III	APOC3	P02656	P33622	P06759	4
PQ-CVD-1	Apolipoprotein A-IV	APOA4	P06727	P06728	P02651	4
PQ-CVD-2	Apolipoprotein C-IV	APOC4	P55056	Q61268	P55797	5
PQ-CVD-2	Apolipoprotein C-I	APOC1	P02654	P34928	P19939	3
PQ-CVD-2	Apolipoprotein M	APOM	O95445	Q9Z1R3	P14630	3
PQ-CVD-2	C-reactive protein	CRP	P02741	P14847	P48199	4
PQ-CVD-2	Apolipoprotein L1	APOL1	O14791			2
PQ-CVD-2	Apolipoprotein F	APOF	Q13790	Q91V80	Q5M889	8

PQ-CVD-2	Phosphatidylcholine-sterol acyltransferase	LCAT	P04180	P16301	P18424	3
PQ-CVD-2	Adiponectin	ADIPOQ	Q15848	Q60994	Q8K3R4	3
PQ-CVD-2	Apolipoprotein C-II	APOC2	P02655	Q05020	G3V8D4	4
PQ-CVD-2	Phospholipid transfer protein	PLTP	P55058	P55065	E9PSP1	4
PQ-CVD-2	Cholesteryl ester transfer protein	CETP	P11597			2
PQ-CVD-2	Lipopolysaccharide-binding protein	LBP	P18428	Q61805	Q63313	4
PQ-CVD-2	Apolipoprotein(a)	LPA	P08519			3
PQ-CVD-2	Endoplasmic reticulum chaperone BiP	HSPA5	P11021	P20029	P06761	2
PQ-CVD-3	Matrix metalloproteinase-9	MMP9	P14780	P41245	P50282	12
PQ-CVD-3	Disintegrin and metalloproteinase domain-containing protein 17	ADAM17	P78536	Q920F8	Q9Z1K9	6
PQ-CVD-3	Exostosin-1	EXT1	Q16394	P97464	Q3B8R0	2
PQ-CVD-3	Exostosin-2	EXT2	Q93063	P70428	B2RYE4	2
PQ-CVD-3	Bifunctional heparan sulfate N-deacetylase/N-sulfotransferase 1	NDST1	P52848	Q3UHN9	Q02353	2
PQ-CVD-3	Bifunctional heparan sulfate N-deacetylase/N-sulfotransferase 2	NDST2	P52849	P52850	D3ZD62	2
PQ-CVD-3	Extracellular sulfatase Sulf-1	SULF1	Q8IWU6	Q8K007	Q8VI60	2
PQ-CVD-3	Extracellular sulfatase Sulf-2	SULF2	Q8IWU5	Q8CFG0	Q3L472	3
PQ-CVD-3	Syndecan-1	SDC1	P18827	P18828	P26260	5
PQ-CVD-3	Glycerol-3-phosphate dehydrogenase [NAD(+)], cytoplasmic	GPD1	P21695	P13707	O35077	2
PQ-CVD-3	Proprotein convertase subtilisin/kexin type 9	PCSK9	Q8NBP7	Q80W65	P59996	10
PQ-CVD-3	Apolipoprotein A-V	APOA5	Q6Q788	Q8C7G5	Q9QUH3	4
PQ-CVD-4	Lipoprotein lipase	LPL	P06858	P11152	Q06000	4
PQ-CVD-4	Hepatic triacylglycerol lipase	LIPC	P11150	P27656	P07867	5
PQ-CVD-4	Endothelial lipase	LIPG	Q9Y5X9	Q9WVG5	Q8VBX1	5
PQ-CVD-4	Angiopoietin-related protein 2	ANGPTL2	Q9UKU9	Q9R045	Q9JJ03	5
PQ-CVD-4	Angiopoietin-related protein 3	ANGPTL3	Q9Y5C1	Q9R182	Q5I0L8	6
PQ-CVD-4	Angiopoietin-related protein 4	ANGPTL4	Q9BY76	Q9Z1P8	Q6TMA8	8
PQ-CVD-4	Angiopoietin-like protein 8	ANGPTL8	Q6UXH0	Q8R1L8	D3ZMI0	4
PQ-CVD-4	Low-density lipoprotein receptor	LDLR	P01130	P35951	P35952	9

PQ-CVD-4	Prolow-density lipoprotein receptor-related protein 1	LRP1	Q07954	Q91ZX7	G3V928	4
PQ-CVD-4	Scavenger receptor class B member 1	SCARB1	Q8WTV0	Q61009		7