

PolyQuant's EcoCAT Kit provides 100 reference peptides for absolute protein quantification of 48 common and critical *E. coli*-specific host cell proteins (HCP). The peptides are released from two individual, completely ¹⁵N labelled, QconCAT proteins.

The QconCATs are optimized for digestion with trypsin or tryptic-like digestion (cleavage after Arg and Lys). Other proteases will not generate suitable reference peptides.

Kit content (for 50 applications):

Component	Amount (mol)	Concentration	Storage buffer
PQ-Eco-1	50 pmol	0.1 pmol/μl	50 mM ABC
PQ-Eco-2	50 pmol	0.1 pmol/μl	50 mM ABC

Sample preparation

QconCATs are added directly to your analyte sample prior to sample preparation (reduction, alkylation, digestion). We recommend to add ≥ 10 nM of QconCAT to your analyte and proceed with your routine sample preparation procedure.

MS measurement

The required amount of reference standard depends on instrumentation. For LC systems used in nanoFlow ($< 1\mu\text{l}/\text{min}$), we recommend using 500 fmol QconCAT on column per injection as a starting point.

Protein list:

QconCAT ID	Protein	Gene	Uniprot	No of peptides
PQ-Eco-1	Carbamoyl phosphate synthase large chain	carB	P00968	2
PQ-Eco-1	Formate acetyltransferase 1	pflB	P09373	3
PQ-Eco-1	Chaperonin GroEL	groEL	P0A6F5	2
PQ-Eco-1	Elongation factor G	fusA	P0A6M8	2
PQ-Eco-1	Enolase	eno	P0A6P9	3
PQ-Eco-1	Chaperone protein DnaK	dnaK	P0A6Y8	2
PQ-Eco-1	Small ribosomal subunit protein uS2	rpsB	P0A7V0	2
PQ-Eco-1	Small ribosomal subunit protein uS3	rpsC	P0A7V3	2
PQ-Eco-1	Small ribosomal subunit protein uS4	rpsD	P0A7V8	2
PQ-Eco-1	Glyceraldehyde-3-phosphate dehydrogenase A	gapA	P0A9B2	3
PQ-Eco-1	Dihydrolipoyl dehydrogenase	lpdA	P0A9P0	2
PQ-Eco-1	ATP synthase subunit alpha	atpA	P0ABB0	2
PQ-Eco-1	Citrate synthase	gltA	P0ABH7	2
PQ-Eco-1	Pyruvate dehydrogenase E1 component	aceE	P0AFG8	2
PQ-Eco-1	Transcription termination factor Rho	rho	P0AG30	2
PQ-Eco-1	Small heat shock protein IbpA	ibpA	P0C054	2
PQ-Eco-1	D-tagatose-1,6-bisphosphate aldolase subunit GatZ	gatZ	P0C8J8	2
PQ-Eco-1	Elongation factor Tu 1	tufA	P0CE47	2
PQ-Eco-1	Ribonuclease E	rne	P21513	2
PQ-Eco-1	5-methyltetrahydropteroyltriglutamate--homocysteine methyltransferase	metE	P25665	2
PQ-Eco-1	Large ribosomal subunit protein uL2	rplB	P60422	2
PQ-Eco-1	Large ribosomal subunit protein uL5	rplE	P62399	2
PQ-Eco-1	Chaperone protein ClpB	clpB	P63284	2
PQ-Eco-2	Isocitrate dehydrogenase [NADP]	icd	P08200	2
PQ-Eco-2	Chaperone protein DnaJ	dnaJ	P08622	2
PQ-Eco-2	DNA-directed RNA polymerase subunit alpha	rpoA	P0A7Z4	2
PQ-Eco-2	S-adenosylmethionine synthase	metK	P0A817	2
PQ-Eco-2	Ferric uptake regulation protein	fur	P0A9A9	2
PQ-Eco-2	FKBP-type peptidyl-prolyl cis-trans isomerase SlyD	slyD	P0A9K9	2
PQ-Eco-2	ATP synthase subunit b	atpF	P0ABA0	2
PQ-Eco-2	DNA-binding transcriptional dual regulator CRP	crp	P0ACJ8	2
PQ-Eco-2	Enterobactin synthase component B	entB	P0ADI4	2
PQ-Eco-2	Transcription termination/antitermination protein NusG	nusG	P0AFG0	2
PQ-Eco-2	2-oxoglutarate dehydrogenase E1 component	sucA	P0AFG3	2
PQ-Eco-2	Dihydrolipoyllysine-residue succinyltransferase component of 2-oxoglutarate dehydrogenase complex	sucB	P0AFG6	2
PQ-Eco-2	Small heat shock protein IbpB	ibpB	P0C058	2
PQ-Eco-2	D-tagatose-1,6-bisphosphate aldolase subunit GatY	gatY	P0C8J6	2
PQ-Eco-2	Methionine synthase	metH	P13009	2

PQ-Eco-2	Glutamine--fructose-6-phosphate aminotransferase [isomerizing]	glmS	P17169	2
PQ-Eco-2	Acetylornithine deacetylase	argE	P23908	2
PQ-Eco-2	Carbonic anhydrase 2	can	P61517	2
PQ-Eco-2	Bifunctional polymyxin resistance protein ArnA	arnA	P77398	2
PQ-Eco-2	Chaperone SurA	surA	P0ABZ6	2
PQ-Eco-2	Chaperone protein Skp	skp	P0AEU7	2
PQ-Eco-2	Selenide, water dikinase	seld	P16456	2
PQ-Eco-2	Co-chaperonin GroES	groES	P0A6F9	2
PQ-Eco-2	Glycogen synthase	glgA	P0A6U8	3
PQ-Eco-2	Catabolite repressor/activator	cra	P0ACP1	2