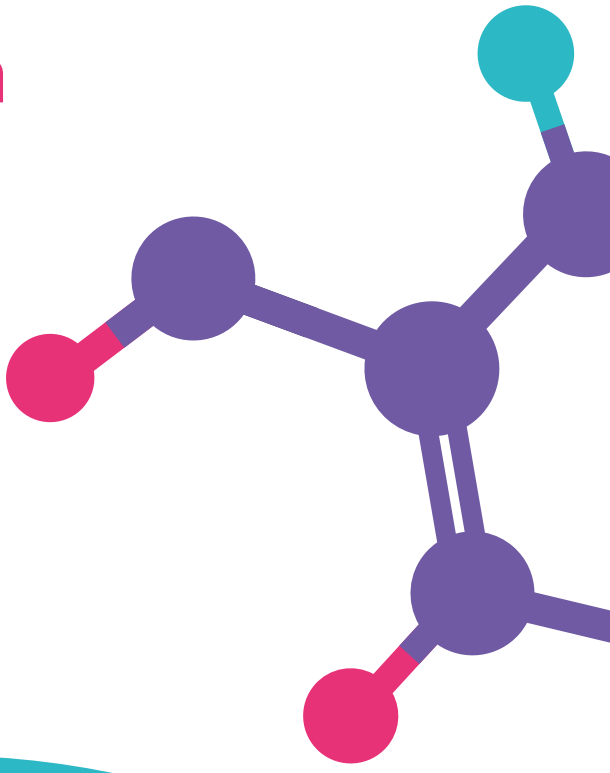
DISCOVERY®
PEPTIDES

Ubiquitin Peptides from Cambridge Research Biochemicals

Ubiquitinylation is a post-translational modification involving the covalent binding of the small, highly conserved protein ubiquitin to a target substrate to regulate protein functions.



> This set of high quality AQUA peptides will allow you to absolutely quantify all ubiquitin chain linkages in a sample using targeted SRM/PRM mass spectrometry approaches. As there are no good antibodies for many chain linkages, it is indeed the only way to quantify all ubiquitin chain linkages.

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www.crbdiscovery.com/discovery-peptides

The ligation of the ubiquitin C-terminus to a target protein is facilitated by a cascade of ubiquitin activating and ligating enzymes and reversed by deubiquitylating enzymes (DUBs).

Ubiquitin possesses seven lysine residues and an N-terminus methionine (M1, K6, K11, K27, K29, K33, K48 and K63), any one of which can be ubiquitinylated itself leading to the assembly of polyubiquitin chains.

Any of these chains lead to different biological outcomes. For example, while K48 chains lead to proteasomal degradation, K63 chains are linked to cell signalling, trafficking and lysosomal degradation.

Ubiquitin signalling is integral to almost all cellular processes in eukaryotes and thus, disorders or mutations in ubiquitin pathways often result in cancer, autoimmune diseases and neurodegenerative diseases such as Parkinson's, Alzheimer's and Huntington's.

Mass spectrometry (MS) based proteomics has become a powerful method for the analysis of ubiquitinylation in the last 15 years. Particularly, targeted MS approaches using heavy isotope labelled K-GG peptides help to identify and quantify ubiquitin chain topologies.

Heap, R.E., Gant, M.S., Lamoliatte, F., Peltier, J. and Trost, M., Mass spectrometry techniques for studying the ubiquitin system (2017), Biochem Soc Transactions, Oct 15;45(5):1137-1148.

Unlabelled Peptides

Ubiquitin M1 Light
crb1000835
GGMQIFVK-acid
25nmol £85

Ubiquitin K6 Light
crb1000805
MQIFV-[K(GG)]-TLTGK-acid
25nmol £150

Ubiquitin K11 Light
crb1000807
TLTG-[K(GG)]-TITLEVEPSDTIENVK-acid
25nmol £150

Ubiquitin K27 Light
crb1000809
TITLEVEPSDTIENV-[K(GG)]-AK-acid
25nmol £150

Ubiquitin K29 Light
crb1000811
A-[K(GG)]-IQDK-acid
25nmol £150

Ubiquitin K33 Light
crb1000813
IQD-[K(GG)]-EGIPPDQQR-acid
25nmol £150

Ubiquitin K48 Light
crb1000815
LIFAG-[K(GG)]-QLEDGR-acid
25nmol £150

Ubiquitin K63 Light
crb1000817
TLSDYNIQ-[K(GG)]-ESTLHLVLR-acid
25nmol £150

Controls

Ubiquitin (12-27) Light
crb1001282
TITLEVEPSDTIENVK-acid
25nmol £85

Ubiquitin (12-27) Heavy
crb1301283
TITLEVEPSDTIENV-[U-$^{13}C_6$,$^{15}N_2$-Lys]-acid
25nmol £220

Ubiquitin (64-72) Light
crb1001284
ESTLHLVLR-acid
25nmol £85

Ubiquitin (64-72) Heavy
crb1301285
ESTLHLVL-[U-$^{13}C_6$,$^{15}N_4$-Arg]-acid
25nmol £220

Stable-labelled Peptides

Ubiquitin M1 Heavy
crb1300804
GGMQIFV-[U-$^{13}C_6$,$^{15}N_2$-Lys]-acid
25nmol £220

Ubiquitin K6 Heavy
crb1300806
MQIFV-[K(GG)]-TLTG-[U-$^{13}C_6$,$^{15}N_2$-Lys]-acid
25nmol £275

Ubiquitin K11 Heavy
crb1300808
TLTG-[K(GG)]-TITLEVEPSDTIENV-[U-$^{13}C_6$,$^{15}N_2$-Lys]-acid
25nmol £275

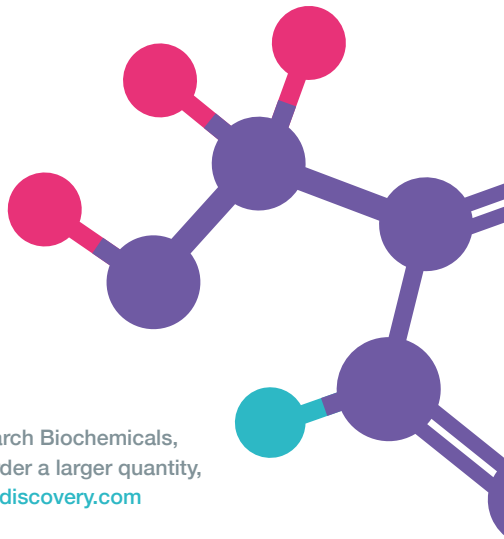
Ubiquitin K27 Heavy
crb1300810
TITLEVEPSDTIENV-[K(GG)]-A-[U-$^{13}C_6$,$^{15}N_2$-Lys]-acid
25nmol £275

Ubiquitin K29 Heavy
crb1300812
A-[K(GG)]-IQD-[U-$^{13}C_6$,$^{15}N_2$-Lys]-acid
25nmol £275

Ubiquitin K33 Heavy
crb1300814
IQD-[K(GG)]-EGIP-[U-$^{13}C_5$,^{15}N-Pro]-DQQ-[U-$^{13}C_6$,$^{15}N_4$-Arg]-acid
25nmol £320

Ubiquitin K48 Heavy
crb1300816
LIFAG-[K(GG)]-QLEDG-[U-$^{13}C_6$,$^{15}N_4$-Arg]-acid
25nmol £350

Ubiquitin K63 Heavy
crb1300818
TLSDYNIQ-[K(GG)]-ESTLHLVL-[U-$^{13}C_6$,$^{15}N_4$-Arg]-acid
25nmol £275



DISCOVERY® Peptides is the new catalogue business from Cambridge Research Biochemicals, a custom peptide provider. If your desired peptide is not listed or you wish to order a larger quantity, please request a custom synthesis quotation by contacting crbsales@crbdiscovery.com

www.crbdiscovery.com/ubiquitin-peptides

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