K63-Linked Di-Ubiquitin (Ub2)

Cat. # SI6302

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Background

Polyubiquitylation is recognized as a post-translational modification that regulates protein stability and protein–protein interactions. The type of polyubiquitin linkage determines the fate of the modified protein(s). Polyubiquitylation through K63 linkages has recently become the focus of intense study. Notably, the topology and functional roles of K63-linked chains differ significantly from those of K48-linked chains. K63-linked polyubiquitin appears to play roles in endocytic trafficking, DNA repair, neurodegeneration, and other cellular processes.

These di-ubiquitin chains are generated by enzymatically linking wild-type ubiquitin through lysine 63. The most distal ubiquitin contains a lysine-to-arginine substitution at position 63, which limits chain extension. This construct serves as a valuable substrate for identifying and characterizing deubiquitinating enzymes (DUBs) that cleave K63 linkages and is useful in structural and binding studies involving ubiquitin-associated domains (UBA) or ubiquitin-interacting motifs (UIMs).

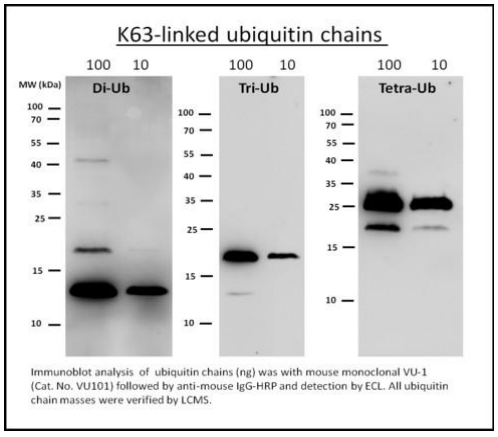
Application(s)

Investigation of DUB linkage specificity

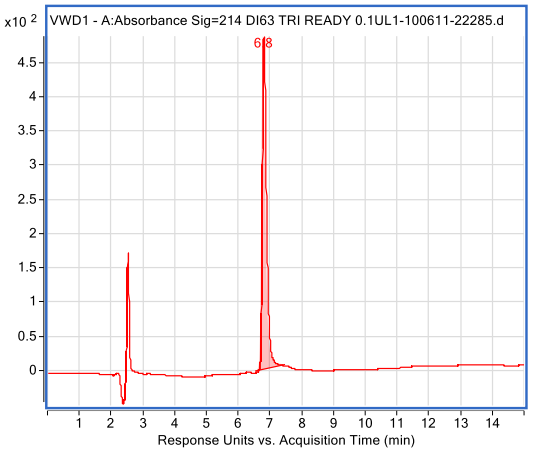
Product Specifications

Tag	None
Purity	≥ 95% by Western blot analysis
Molecular Weight	17,139.7 Da
Quantity	50 µg
Species	Human
Expression System	*E. coli*
Physical State	Liquid
Buffer	20 mM Tris-HCl, pH 7.5, 150 mM NaCl, 1 mM EDTA
Solubility	> 1mg/ml
Concentration	Lot dependent, please see Certificate of Analysis or vial label for actual concentration
Stability & Storage	Over 1 year at -80° C. Avoid repeated freeze/thaw cycles

Product QC



Western Blot



RP-HPLC

References

1. Liu P., et al., Sci Signal, 2018; 5;11(533)
2. Le Guerroué F., et al., Cell Death Differ, 2021;28(2):439-454.