

Figure 1. Proposed models for substrate poly-ubiquitylation



Figure 2 Ubc7 is self-ubiquitylated on its activesite cysteine as well as on Lys₁₁₈. A. Cells coexpressing Ubc7-HA and either Ub or MycUb were lysed and proteins were precipitated using anti HA antibodies. Ubc7 was detected with anti HA antibodies after extracting the proteins in a sample buffer with or without the reducing agent DTT. Proteins were separated on a SDS-PAGE and immunoblotted with anti HA antibodies. B. Cells expressing the indicated Ubc7 molecules were lysed as above and Ubc7conjugates were detected in the presence of DTT. K0- lysineless Ubc7



Figure3. A role for Lys₁₁₈ on Ubc7 in Doa10-dependent degradation. A. Doubling time values of cells expressing the indicated Ubc7 variants grown in in SD-Ura media. B, C. CHX-chase analyses of the indicated substrates in cells expressing wild type Ubc7 and Ubc7_{R118}.

250-150-Figure 4. . In vitro analysis of Ubc7 activity. Wild type Ubc7 100-Lys¹¹⁸ mutant, co-expressed with Cue1 in a bi-citronic plasmid 75were purified from bacteria using an intein tag that binds on 50chitin column. Proteins were released from the column through 37. treatment with DTT, dialyzed and then were subjected to in vitro ubiquitylation assay for the indicated time periods, as described 25. by Bazirgan and co-workers (Bazirgan et al. 2006).

> IP:FLAG IB:FLAG





Doa10 substrates. A. Schematic presentation of the topology of the Doa10 substrate Vma12-Ndc10C'. B. CHX-chase analysis of the degradation of Vma12-Ndc10C', expressed at the indicated knockout strains. C. 10 OD equivalents of the indicated strains, expressing Vma12-Ndc10C' were lysed and proteins were precipitated using anti FLAG affinity gel, followed by immunoblotting with anti Ub and anti-FLAG Abs.