

Pol ι represents a new class of USP7 substrates

NICHD

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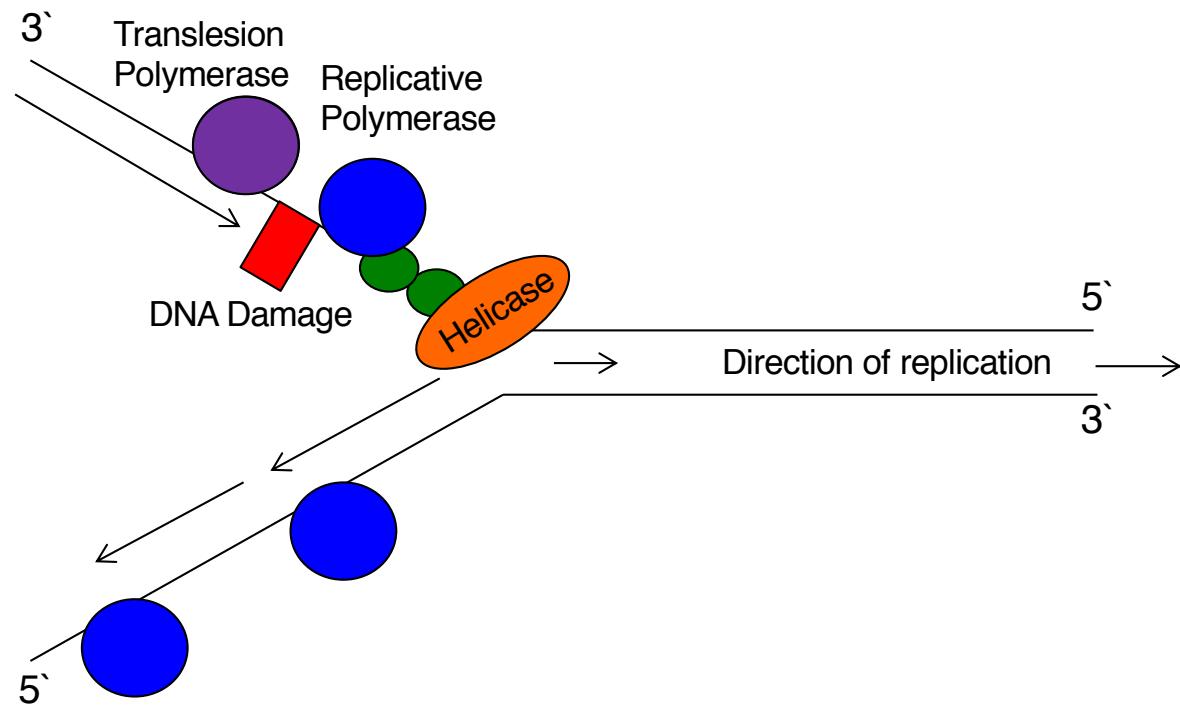
Gabrielle Valles

Irina Bezsonova

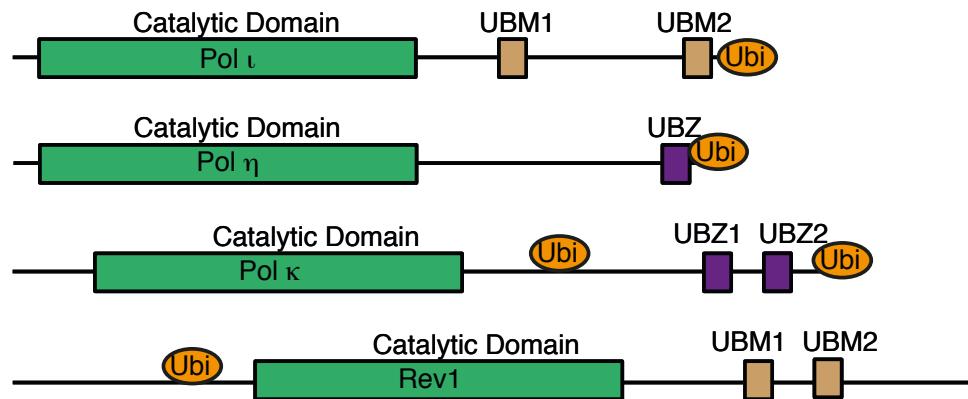
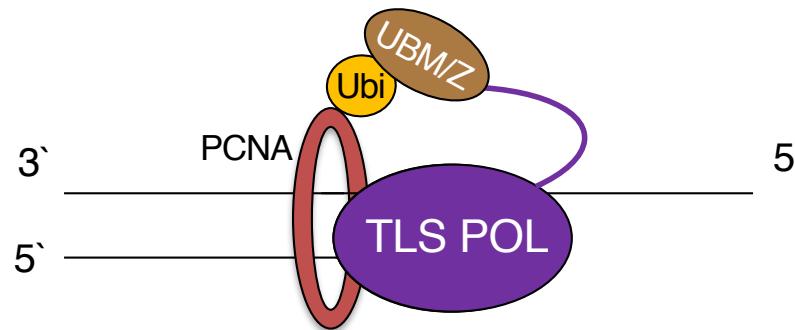


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DNA damage tolerance prevents replication fork collapse

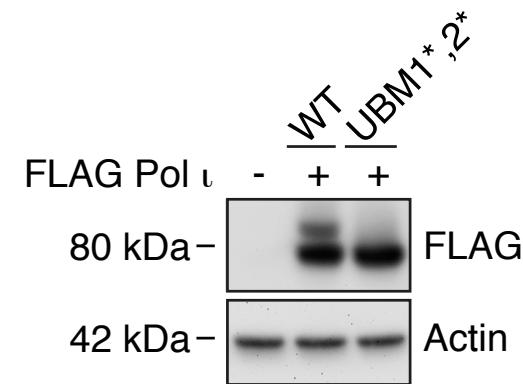
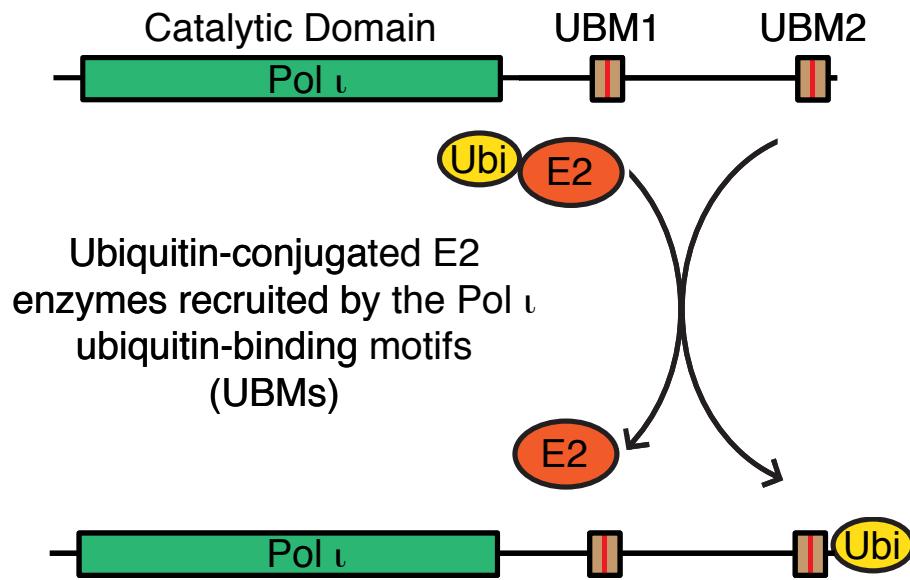


Translesion synthesis is coordinated by mono-ubiquitination



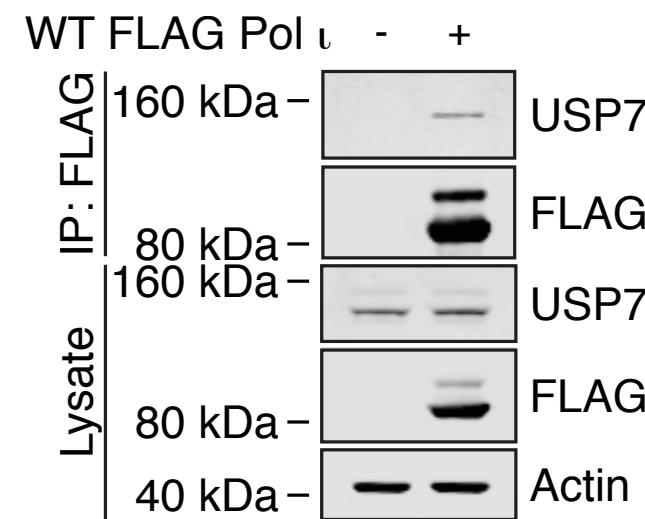
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Pol ι is regulated by mono-ubiquitination

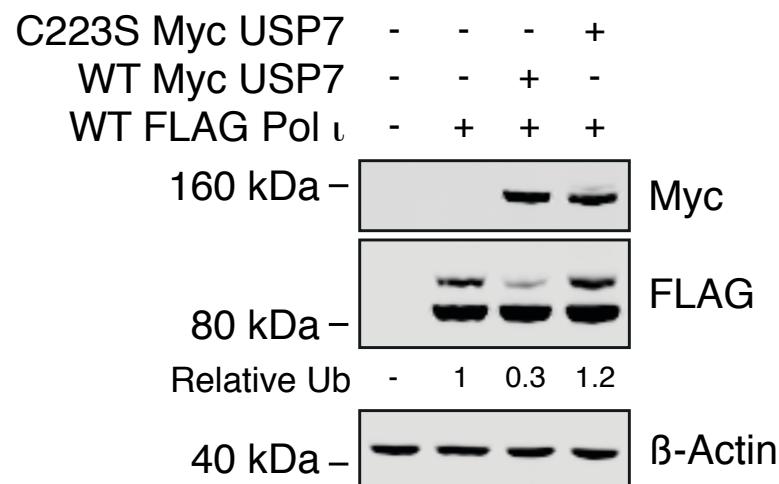


Pol ι associates with USP7 in cells

IP: FLAG Pol ι	
Proteins	unique peptides
Pol ι	59
PCNA	6
POLD2	4
USP7	1

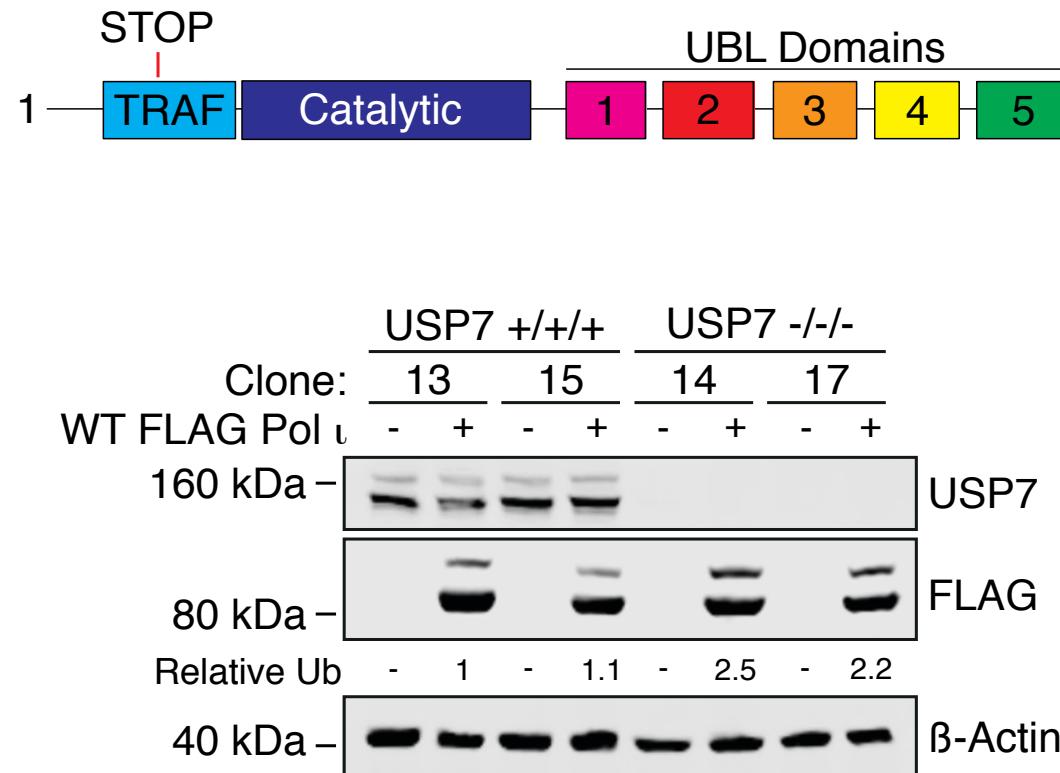


Pol ι is deubiquitinated by USP7 in cells



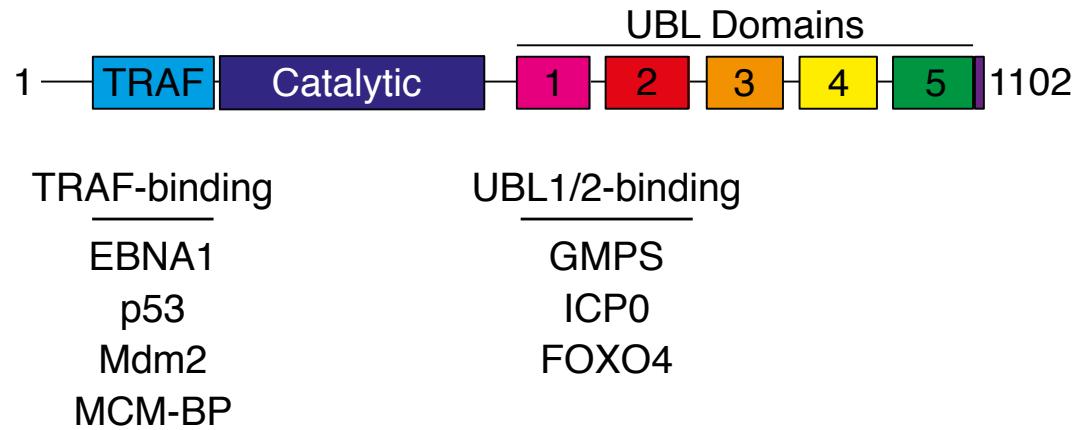
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Pol τ is deubiquitinated by USP7 in cells

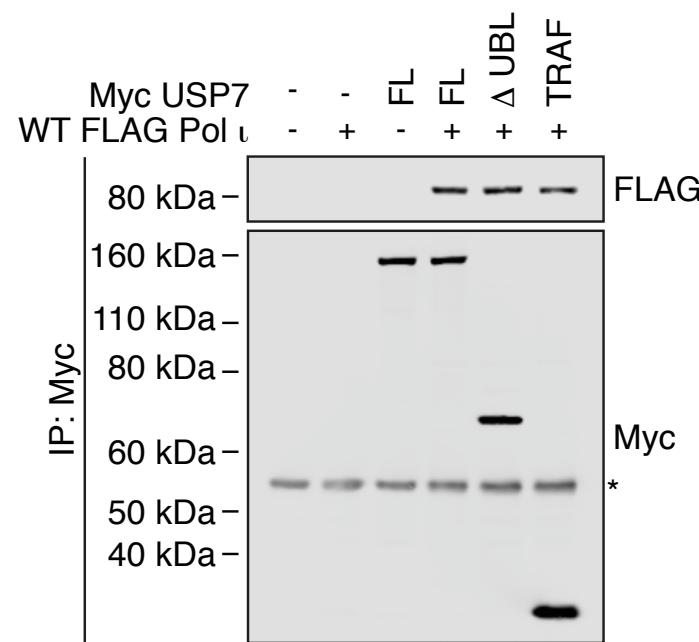
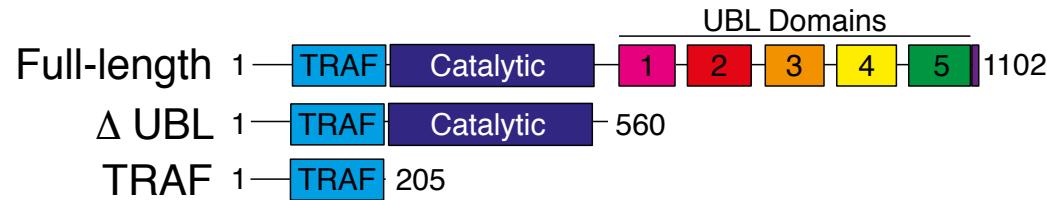


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Mapping the Pol ι – USP7 interaction

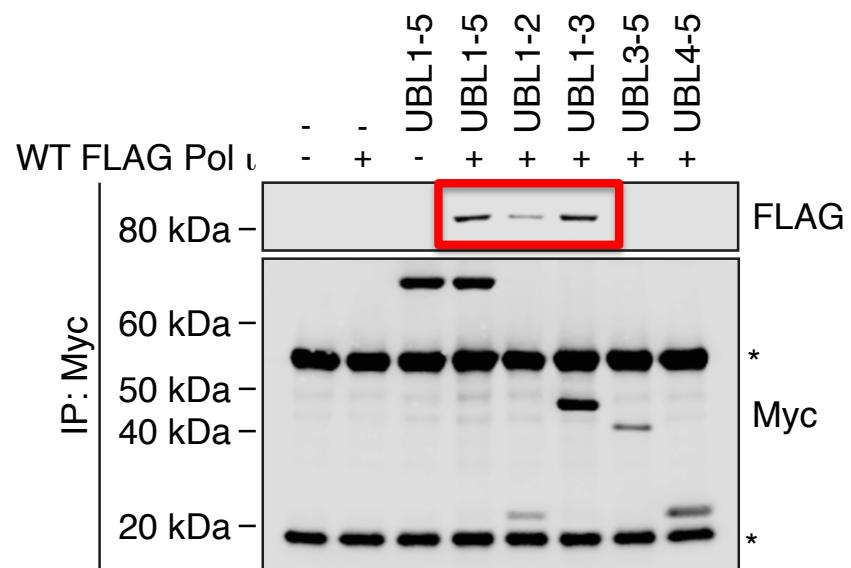
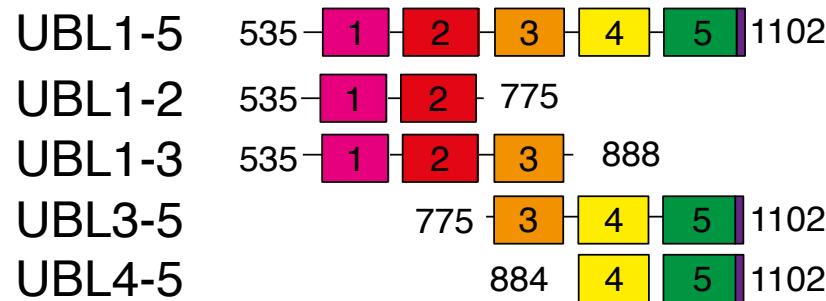


Pol ι associates with the USP7 TRAF domain

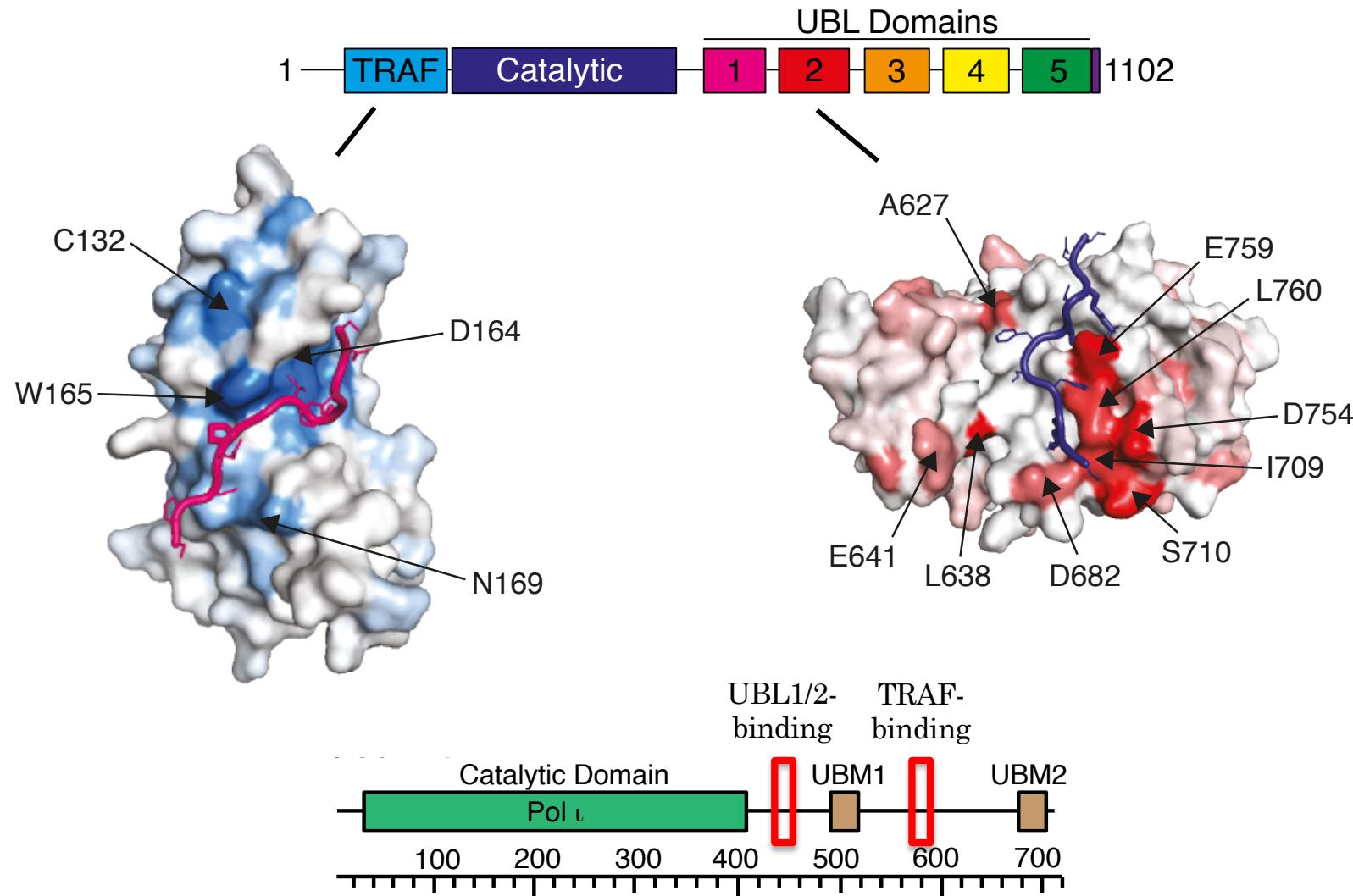


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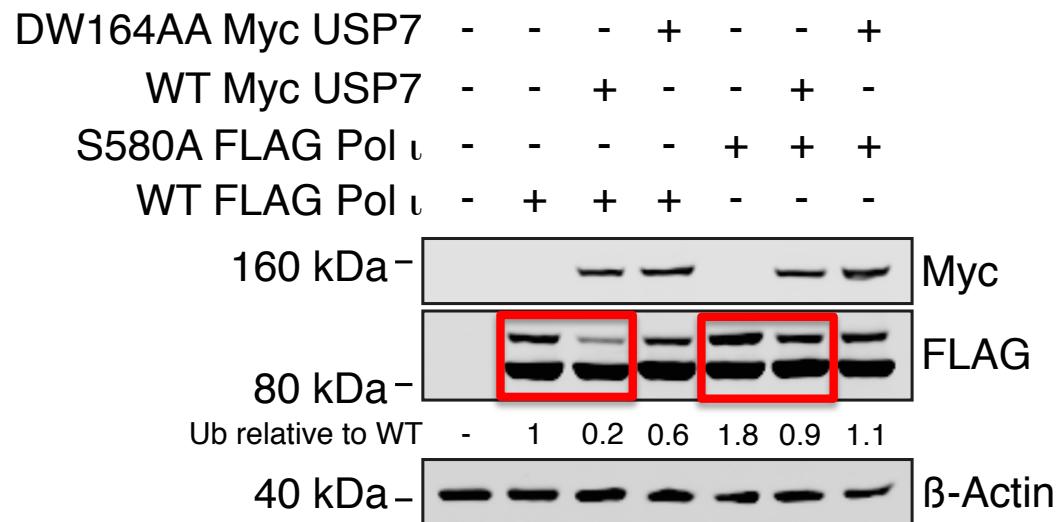
Pol t also associates with UBL1/2 of USP7



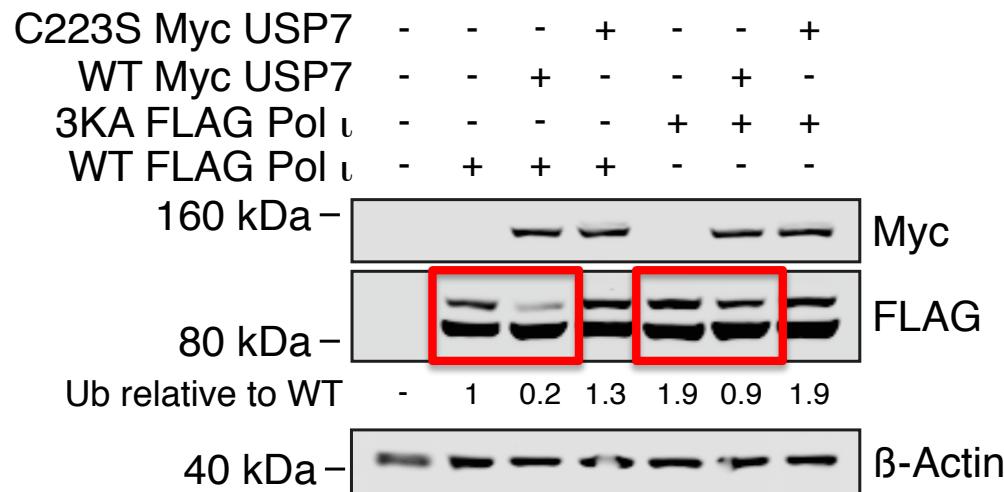
Bipartite binding between USP7 and Pol ι



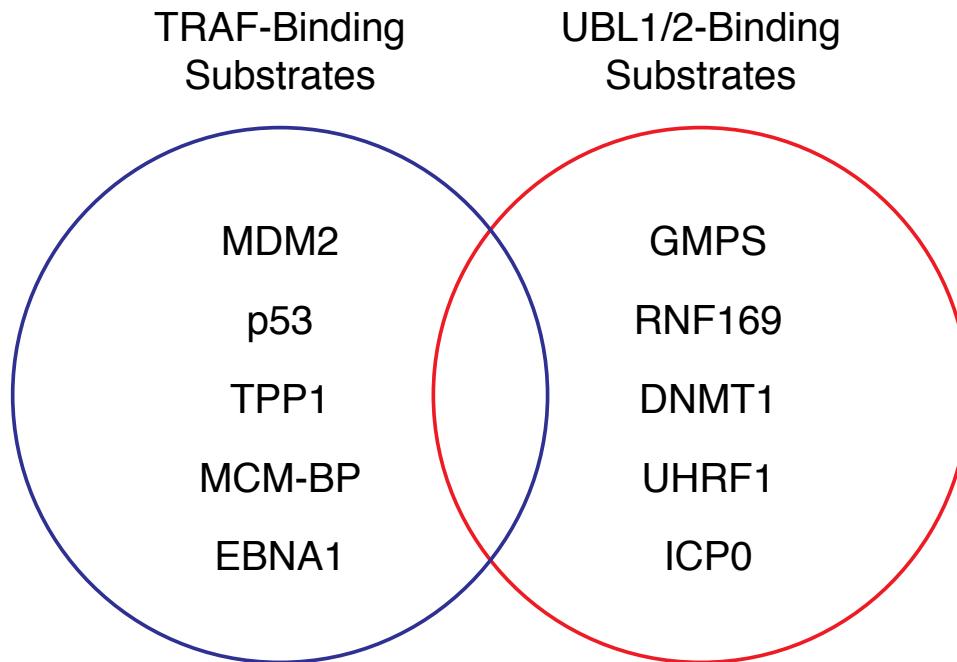
Mutation of the Pol τ TRAF-binding site disrupts deubiquitination by USP7



Mutation of the Pol ι UBL2-binding site also limits deubiquitination by USP7

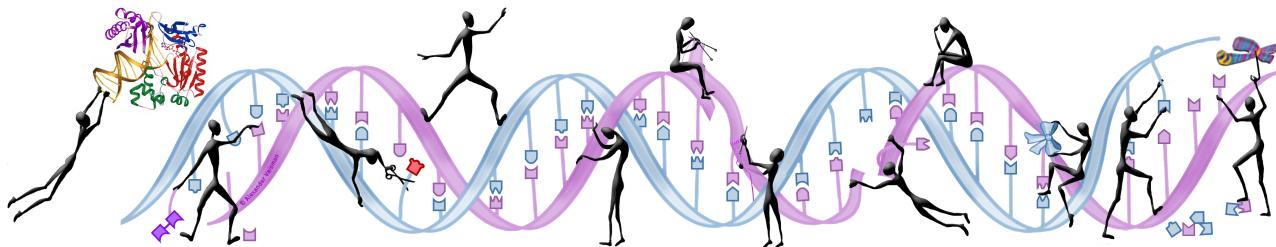


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Acknowledgments

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