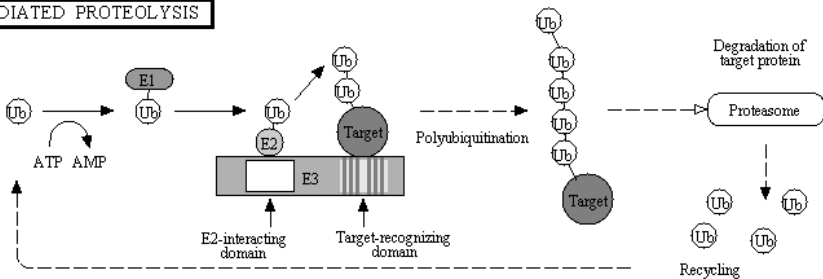


UBIQUITIN MEDIATED PROTEOLYSIS



E1
(Ubiquitin-activating enzyme)

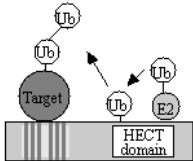
UBA6	URLE1A	UBLE1B	UBA3
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E2
(Ubiquitin-conjugating enzyme)

UBE2A	UBE2B	UBE2C	UBE2D2	UBE2F	UBE2G1	UBE2G2	UBE2H
UBE2I	UBE2J1	UBE2J2	UBE2L3	UBE2L6	UBE2M	UBE2N	UBE2O
UBE2Q2	UBE2R2	UBE2S	UBE2U	UBE2W	UBE2Z	UBE2K	BIRC6

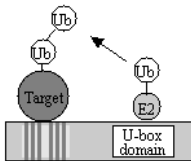
E3
(Ubiquitin ligase)

HECT type E3



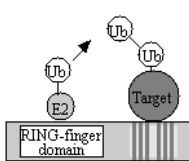
UBE3A	UBE3B	UBE3C	SMURF1	ITCH
WWP1	WWP2	TRIP12	NEDD4	HUWE1
UBR5	HERC1	HERC2	HERC3	HERC4

U-box type E3



UBE4A	UBE4B	CHIP
PP1L2	PRP19	UIP5

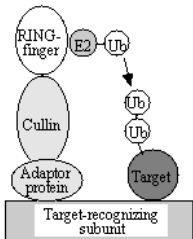
single RING-finger type E3



Mdm2	CE1	PARK2	SLAH1	PML	TRAF6	MAP2K1
RFWD2	RCHY1	BIRC2	PLAS1	SYVN1	NHLRC1	AIRE
MGRN1	BRCA1	FANCL	MID1	TRIM32	TRIM37	

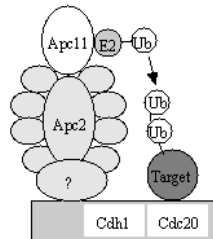
multi subunit RING-finger type E3

Cullin-Rbx E3



	RING finger	Cullin	Adaptor protein	Target recognizing subunit
SCF complex	RBX1	Cul1	SKP1	FBXW14
ECV complex	RBX1	CUL2	EloB EloC	VHLbox
Cul3 complex	RBX1	CUL3		RHOBTB4
Cul4 complex	RBX1	CUL4B	DDB1	ERCC8
ECS complex	RNF7	CUL5	EloB EloC	SOCS4
Cul7 complex	RBX1	Cul7	SKP1	Fbxw8

APC/C



	RING finger	Cullin	Adaptor protein	Target recognizing subunit	Other subunits
APC/C	Apc11	Apc2	?	Cdc20	Apc1 CDC27
				Cdh1	Apc4 Apc5
					Apc6 Apc7
					CDC23 Apc9
					Apc10 Apc12
					ANAPC13