

Ubiquitin E3 Ligase Complex Antibody Sampler Kit

Cat# AK0279

Upon receipt, store at -20°C. Avoid freeze/thaw cycles.

PRODUCT DESCRIPTION

Ubiquitin can be covalently linked to many cellular proteins by the ubiquitination process, which targets proteins for degradation by the 26S proteasome. Ubiquitin is first activated by forming a thiolester complex with the activation component E1. The activated ubiquitin is subsequently transferred to the ubiquitin-carrier protein E2, and then from E2 to ubiquitin ligase E3 for final delivery to the ϵ -NH₂ of the target protein lysine residue. Research studies suggest that activated E2 associates transiently with E3, and the dissociation is a critical step for ubiquitination. S phase kinase-associated protein 1 (Skp1) is a critical scaffold protein of the Skp1/CUL1/F-box (SCF) E3 ubiquitin ligase protein complex. Various F-box proteins (e.g. β -TrCP, Skp2) mediate an interaction with Skp1 via their defining and conserved domain of 40 amino acids and with substrates to be ubiquitinated. RING-box protein 1 (RBX1 or ROC1) is another essential component of the SCF complex. RBX1 mediates the neddylation of CUL1, which activates SCF E3 ligase by facilitating the ubiquitin transfer from E2 to substrates. The RING finger domain of RBX1 is required for ubiquitin ligation. Cullin-4 (CUL4) is a member of the cullin family of related ubiquitin ligases. The carboxy-terminal domain of CUL4 interacts with Rbx1 and E2 enzyme while the amino-terminal CUL4 domain interacts with BPB domain of UV-damaged DNA binding protein DDB-1 to form a CUL4-DDB1 ubiquitin ligase complex. Damaged DNA-Binding Protein (DDB) consists of a 127 kDa subunit (DDB-1) and a 48 kDa subunit (DDB-2) that contribute to the formation of the UV-damaged DNA-binding protein complex (UV-DDB). In conjunction with CUL4A and RBX1, the UV-DDB complex forms an E3 ubiquitin ligase that recognizes a broad spectrum of DNA lesions. The complex polyubiquitinates components of the nucleotide excision repair pathway.

PRODUCT INCLUDES

Cat No.	Product name	Quantity	Applications	Reactivity	Host
A340116	CUL4A Polyclonal Antibody	20 μ L	WB, IHC, ELISA	Human, Mouse	Rabbit
A340118	DDB1 Polyclonal Antibody	20 μ L	WB, IHC, ELISA	Human, Mouse, Rat	Rabbit
A340671	SKP1 p19 Polyclonal Antibody	20 μ L	WB, IHC, ELISA	Human, Mouse, Rat, Monkey	Rabbit
A340672	SKP2 p45 Polyclonal Antibody	20 μ L	WB, IHC, IF, ELISA	Human	Rabbit

A1013s	Goat Anti-Rabbit IgG (H+L) (peroxidase/HRP conjugated)	120μL	WB, ELISA	Rabbit	Goat
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PRODUCT USE LIMITATION

These products are intended for research use only.