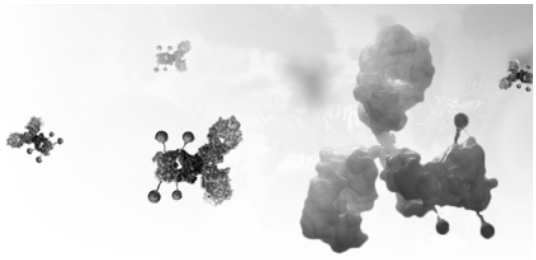

Anti-Ubiquitin (phospho S65) polyclonal antibody (CABT-B1642)

This product is for research use only and is not intended for diagnostic use.

PRODUCT INFORMATION

Immunogen	Linear peptide corresponding to human phospho-Ubiquitin (Ser65).
Isotype	IgG
Source/Host	Rabbit
Species Reactivity	Human
Purification	Affinity
Conjugate	Unconjugated
Applications	WB, ICC
Epitope	Phosphorylated Ser65
Molecular Weight	~8/16 kDa observed. The bands observed at 16 kda are likely di-ubiquitin and the smear of bands at 60-80kDa is likely polyUbiquitin.
Format	Liquid
Concentration	Please refer to lot specific datasheet.
Size	100 µl
Buffer	PBS and 0.1% sodium azide.
Preservative	0.1% Sodium Azide
Storage	Stable for 1 year at 2-8°C from date of receipt.

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BACKGROUND

Introduction

Ubiquitin (Ub) is encoded by the UBB gene in human. Covalent modifications of target proteins via different Ub Lys residues are well documented events during cellular DNA repair, ER-associated degradation (ERAD), transcription activation, lysosomal and proteasomal degradation. PINK1 (PTEN induced putative kinase 1) is a Ser/Thr kinase that specifically accumulates in depolarized mitochondria, where it acts as a positive regulator of parkin (Park2) E3 ubiquitin (Ub) ligase activity by phosphorylating Ub at Ser65 as well as the corresponding Ser residue in parkin N-terminal Ub-like (UBL) domain. Phosphorylated Ub interacts with phosphorylated parkin at its GINGO0 domain in an allosteric manner, inducing a conformation change and exposing parkin RING2 domain catalytic cysteine for full ligase activity. NMR based conformation study reveals that Ser65 phosphorylated Ub exists in two conformations in solution. The major conformation displays altered surface properties, while the second phosphoUb conformation exhibits a retracted C-terminal tail by two residues into the Ub core. Ub Ser65 phosphorylation has little effect toward E1-mediated E2 charging and mainly affects the discharging of E2 enzymes to form polyUb chains. In addition, the majority of deubiquitinases (DUBs), including USP8, USP15 and USP30, are shown to exhibit impaired activity against Lys63-linked poly-phosphoUb.

GENE INFORMATION

Entrez Gene ID	7314
UniProt ID	P0CG47

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