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Anti-USP37 Antibody

Rabbit Polyclonal antibody
Catalog # ABV11883

Product Information

Application	WB
Primary Accession	Q86T82
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	110170

Additional Information

Gene ID	57695
Positive Control	WB: HeLa, mouse brain, rat brain lystes
Application & Usage	WB; 1:500 – 1:2000
Alias Symbol	USP37
Other Names	KIAA1594, Ubiquitin carboxyl-terminal hydrolase 37, Deubiquitinating enzyme 37, Ubiquitin thioesterase 37, Ubiquitin-specific-processing protease 37
Formulation	In 0.42% Potassium phosphate; 0.87% Sodium chloride; pH 7.3; 30% glycerol and 0.01% sodium azide
Reconstitution & Storage	12 months under -20°C
Background Descriptions	
Precautions	Anti-USP37 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	USP37
Synonyms	KIAA1594
Function	Deubiquitinase that plays a role in different processes including cell cycle regulation, DNA replication or DNA damage response (PubMed:26299517, PubMed:27296872, PubMed:31911859, PubMed:34509474). Antagonizes the anaphase-promoting complex (APC/C) during G1/S transition by mediating deubiquitination of cyclin-A (CCNA1 and CCNA2), thereby promoting S phase entry. Specifically mediates deubiquitination of 'Lys-11'-linked polyubiquitin chains, a specific ubiquitin-linkage type mediated by the APC/C complex. Phosphorylation at Ser-628 during G1/S phase maximizes the deubiquitinase

activity, leading to prevent degradation of cyclin-A (CCNA1 and CCNA2) (PubMed:21596315). Plays an important role in the regulation of DNA replication by stabilizing the licensing factor CDT1 (PubMed:27296872). Also plays an essential role beyond S-phase entry to promote the efficiency and fidelity of replication by deubiquitinating checkpoint kinase 1/CHK1, promoting its stability (PubMed:34509474). Sustains the DNA damage response (DDR) by deubiquitinating and stabilizing the ATP-dependent DNA helicase BLM (PubMed:34606619). Mechanistically, DNA double-strand breaks (DSB) promotes ATM-mediated phosphorylation of USP37 and enhances the binding between USP37 and BLM (PubMed:34606619). Promotes cell migration by deubiquitinating and stabilizing the epithelial-mesenchymal transition (EMT)-inducing transcription factor SNAI (PubMed:31911859). Plays a role in the regulation of mitotic spindle assembly and mitotic progression by associating with chromatin-associated WAPL and stabilizing it through deubiquitination (PubMed:26299517).

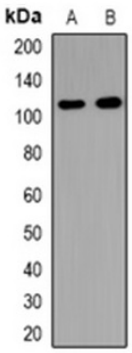
Cellular Location Nucleus. Chromosome

Tissue Location Expressed in brain and prostate.

Background

Deubiquitinase that antagonizes the anaphase-promoting complex (APC/C) during G1/S transition by mediating deubiquitination of cyclin-A (CCNA1 and CCNA2), thereby promoting S phase entry. Specifically mediates deubiquitination of 'Lys-11'-linked polyubiquitin chains, a specific ubiquitin-linkage type mediated by the APC/C complex. Also mediates deubiquitination of 'Lys-48'-linked polyubiquitin chains in vitro. Phosphorylation at Ser-628 during G1/S phase maximizes the deubiquitinase activity, leading to prevent degradation of cyclin-A (CCNA1 and CCNA2).

Images



Western blot analysis of USP37 expression in Hela(A), mouse brain(B) whole cell lysates.