

USP8 Antibody

Rabbit Anti Human Polyclonal Antibody

Catalog # ABV11707

Product Information

Application	WB
Primary Accession	P40818
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	127523

Additional Information

Gene ID	9101
Positive Control	Western blot: Jurkat Cell lysate
Application & Usage	Western blot: 1-4 μ g/ml.
Other Names	Deubiquitinating enzyme 8, hUBPy, HumORF8, KIAA0055, MGC129718, Ubiquitin carboxyl-terminal hydrolase 8, Ubiquitin-specific processing protease 8, Ubiquitin thioesterase 8, UBP, Ubiquitin Specific Protease 8.
Target/Specificity	USP8
Antibody Form	Liquid
Appearance	Colorless liquid
Formulation	30 μ g (0.5 mg/ml) of antibody in PBS pH 7.2 containing 0.01 % BSA, 0.01 % thimerosal, and 50 % glycerol.
Handling	The antibody solution should be gently mixed before use.
Reconstitution & Storage	-20 °C
Background Descriptions	
Precautions	USP8 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	USP8 (HGNC:12631)
Synonyms	KIAA0055, UBPY

Function	Hydrolase that can remove conjugated ubiquitin from proteins and therefore plays an important regulatory role at the level of protein turnover by preventing degradation. Converts both 'Lys-48' and 'Lys-63'-linked ubiquitin chains. Catalytic activity is enhanced in the M phase. Involved in cell proliferation. Required to enter into S phase in response to serum stimulation. May regulate T-cell anergy mediated by RNF128 via the formation of a complex containing RNF128 and OTUB1. Probably regulates the stability of STAM2 and RASGRF1. Regulates endosomal ubiquitin dynamics, cargo sorting, membrane traffic at early endosomes, and maintenance of ESCRT-0 stability. The level of protein ubiquitination on endosomes is essential for maintaining the morphology of the organelle. Deubiquitinates EPS15 and controls tyrosine kinase stability. Removes conjugated ubiquitin from EGFR thus regulating EGFR degradation and downstream MAPK signaling. Involved in acrosome biogenesis through interaction with the spermatid ESCRT-0 complex and microtubules. Deubiquitinates BIRC6/bruce and KIF23/MKLP1. Deubiquitinates BACE1 which inhibits BACE1 lysosomal degradation and modulates BACE-mediated APP cleavage and amyloid-beta formation (PubMed: 27302062).
Cellular Location	Cytoplasm. Nucleus {ECO:0000250 UniProtKB:Q80U87} Endosome membrane; Peripheral membrane protein. Cell membrane; Peripheral membrane protein

Background

Ubiquitinating enzymes (UBEs) catalyze protein ubiquitination, a reversible process countered by deubiquitinating enzyme (DUB) action. Five DUB subfamilies are recognized, including the USP, UCH, OTU, MJD, and JAMM enzymes. The deubiquitinating enzyme ubiquitin-specific protease 8 (USP8/UBPy) is a cysteine protease belonging to the USP/UBP subfamily. Research studies have shown that USP8 is an essential growth-regulated enzyme indispensable for cell proliferation and survival. Indeed, conditional knock-out of murine USP8 was shown to promote a dramatic loss in expression of receptor tyrosine kinases, including EGFR, ErbB3, and c-Met. In agreement with these findings, USP8 inactivation leads to enhanced ubiquitination of ligand-activated EGFR. Furthermore, phosphorylation of USP8 at Ser680 results in its binding of 14-3-3, catalytic inactivation, and reduced EGFR deubiquitination. It appears as though USP8, in conjunction with components of the ESCRT-0 complex, plays an integral role in the early endosomal sorting machinery that functions to protect EGFR from lysosomal degradation.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.