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Anti-UBR2 Picoband™ Antibody (monoclonal, 2G10)

Catalog # ABO15018

Product Information

Application	WB
Primary Accession	Q8IWV8
Host	Mouse
Isotype	Mouse IgG2a
Reactivity	Human
Clonality	Monoclonal
Format	Lyophilized
Description	Anti-UBR2 Picoband™ Antibody (monoclonal, 2G10) . Tested in WB applications. This antibody reacts with Human.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	23304
Other Names	E3 ubiquitin-protein ligase UBR2, 2.3.2.27, N-recognin-2, RING-type E3 ubiquitin transferase UBR2, Ubiquitin-protein ligase E3-alpha-2, Ubiquitin-protein ligase E3-alpha-II, UBR2, C6orf133, KIAA0349
Calculated MW	200538
Application Details	Western blot, 0.25-0.5 □g/ml, Human
Source	Eukaryota
Contents	Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na2HPO4.
Clone Names	Clone: 2G10
Immunogen	E.coli-derived human UBR2 recombinant protein (Position: Q10-A664).
Purification	Immunogen affinity purified.
Storage	Store at -20˚C for one year from date of receipt. After reconstitution, at 4˚C for one month. It can also be aliquotted and stored frozen at -20˚C for six months. Avoid repeated freeze-thaw cycles.

Protein Information

Name	UBR2
Synonyms	C6orf133, KIAA0349

Function	E3 ubiquitin-protein ligase which is a component of the N-end rule pathway (PubMed:15548684, PubMed:20835242, PubMed:28392261). Recognizes and binds to proteins bearing specific N-terminal residues (N-degrons) that are destabilizing according to the N-end rule, leading to their ubiquitination and subsequent degradation (PubMed:20835242, PubMed:28392261). Recognizes both type-1 and type-2 N-degrons, containing positively charged amino acids (Arg, Lys and His) and bulky and hydrophobic amino acids, respectively (PubMed:20835242, PubMed:28392261). Does not ubiquitinate proteins that are acetylated at the N-terminus (PubMed:20835242). In contrast, it strongly binds methylated N-degrons (PubMed:28392261). Plays a critical role in chromatin inactivation and chromosome-wide transcriptional silencing during meiosis via ubiquitination of histone H2A (By similarity). Binds leucine and is a negative regulator of the leucine-mTOR signaling pathway, thereby controlling cell growth (PubMed:20298436). Required for spermatogenesis, promotes, with Tex19.1, SPO11-dependent recombination foci to accumulate and drive robust homologous chromosome synapsis (By similarity). Polyubiquitinates LINE-1 retrotransposon encoded, LIRE1, which induces degradation, inhibiting LINE-1 retrotransposon mobilization (By similarity). Catalyzes ubiquitination and degradation of the N-terminal part of NLRP1 following NLRP1 activation by pathogens and other damage-associated signals: ubiquitination promotes degradation of the N-terminal part and subsequent release of the cleaved C-terminal part of NLRP1, which polymerizes and forms the NLRP1 inflammasome followed by host cell pyroptosis (By similarity). Plays a role in T-cell receptor signaling by inducing 'Lys-63'-linked ubiquitination of lymphocyte cell-specific kinase LCK (PubMed:38225265). This activity is regulated by DUSP22, which induces 'Lys-48'-linked ubiquitination of UBR2, leading to its proteasomal degradation by SCF E3 ubiquitin-protein ligase complex (PubMed:38225265).
Cellular Location	Nucleus {ECO:0000250|UniProtKB:Q6WKZ8}. Chromosome {ECO:0000250|UniProtKB:Q6WKZ8}. Note=Associated with chromatin during meiosis. {ECO:0000250|UniProtKB:Q6WKZ8}
Tissue Location	Broadly expressed, with highest levels in skeletal muscle, kidney and pancreas. Present in acinar cells of the pancreas (at protein level).

Background

E3 ubiquitin-protein ligase UBR2 is an enzyme that in humans is encoded by the UBR2 gene. It is mapped to 6p21.1. This gene encodes an E3 ubiquitin ligase of the N-end rule proteolytic pathway that targets proteins with destabilizing N-terminal residues for polyubiquitylation and proteasome-mediated degradation. Alternative splicing results in multiple transcript variants.

Images

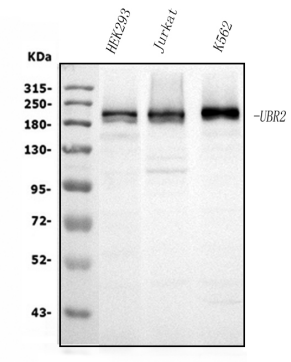


Figure 1. Western blot analysis of UBR2 using anti-UBR2 antibody (M05812).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours.
The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: human HEK293 whole cell lysates,
Lane 2: human Jurkat whole cell lysates,
Lane 3: human K562 whole cell lysates.
After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes.
Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5

hour at RT. The membrane was incubated with mouse anti-UBR2 antigen affinity purified monoclonal antibody (Catalog # M05812) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for UBR2 at approximately 202KD. The expected band size for UBR2 is at 202KD.

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