

#### Anti-UBR2 Picoband<sup>™</sup> Antibody (monoclonal, 2G10) Catalog # ABO15018

Specification

# Anti-UBR2 Picoband<sup>™</sup> Antibody (monoclonal, 2G10) - Product Information

Application	WB
Primary Accession	<u>Q8IWV8</u>
Host	Mouse
Isotype	Mouse IgG2a
Reactivity	Human
Clonality	Monoclonal
Format	Lyophilized
Description	
Anti-UBR2 Picoband <sup>™</sup> Antibody (mono reacts with Human.	clonal, 2G10) . Tested in WB applications. This antibody

**Reconstitution** Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

# Anti-UBR2 Picoband<sup>™</sup> Antibody (monoclonal, 2G10) - 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 202 kDa KDa

**Application Details** Western blot, 0.25-0.5 µg/ml, Human<br>

**Contents** Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na2HPO4.

**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.

## Anti-UBR2 Picoband<sup>™</sup> Antibody (monoclonal, 2G10) - Protein Information



Name UBR2

Synonyms C6orf133, KIAA0349

### Function

E3 ubiguitin-protein ligase which is a component of the N-end rule pathway (PubMed:<a href="http://www.uniprot.org/citations/15548684" target=" blank">15548684</a>, PubMed:<a href="http://www.uniprot.org/citations/20835242" target="\_blank">20835242</a>, PubMed:<a href="http://www.uniprot.org/citations/28392261" target="\_blank">28392261</a>). Recognizes and binds to proteins bearing specific N-terminal residues (N-degrons) that are destabilizing according to the N-end rule, leading to their ubiguitination and subsequent degradation (PubMed:<a href="http://www.uniprot.org/citations/20835242" target=" blank">20835242</a>, PubMed:<a href="http://www.uniprot.org/citations/28392261" target=" blank">28392261</a>). 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:<a href="http://www.uniprot.org/citations/20835242" target=" blank">20835242</a>, PubMed:<a href="http://www.uniprot.org/citations/28392261" target=" blank">28392261</a>). Does not ubiquitinate proteins that are acetylated at the N-terminus (PubMed:<a href="http://www.uniprot.org/citations/20835242" target=" blank">20835242</a>). In contrast, it strongly binds methylated N-degrons (PubMed:<a href="http://www.uniprot.org/citations/28392261" target=" blank">28392261</a>). 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:<a href="http://www.uniprot.org/citations/20298436" target=" blank">20298436</a>). Required for spermatogenesis, promotes, with Tex19.1, SPO11-dependent recombination foci to accumulate and drive robust homologous chromosome synapsis (By similarity). Polyubiguitinates 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: ubiguitination 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 ubiguitination of lymphocyte cell-specific kinase LCK (PubMed: <a href="http://www.uniprot.org/citations/38225265" target=" blank">38225265</a>). 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:<a href="http://www.uniprot.org/citations/38225265" target=" blank">38225265</a>).

#### **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).

## Anti-UBR2 Picoband<sup>™</sup> Antibody (monoclonal, 2G10) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- <u>Western Blot</u>
- Blocking Peptides
- <u>Dot Blot</u>



- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

Anti-UBR2 Picoband<sup>™</sup> Antibody (monoclonal, 2G10) - 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  $\mu$ g/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.

## Anti-UBR2 Picoband<sup>™</sup> Antibody (monoclonal, 2G10) - 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.