abcam

Product datasheet

Anti-HUWE1/Mule antibody ab70161

2 Abreviews 16 References 4 Images

Overview

Product name	Anti-HUWE1/Mule antibody
Description	Rabbit polyclonal to HUWE1/Mule
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P, IP
Species reactivity	**Reacts with:** Mouse, Human **Predicted to work with:** Chimpanzee, Gorilla, Orangutan
Immunogen	Synthetic peptide corresponding to Human HUWE1/Mule aa 2250-2300. Database link: **Q7Z6Z7**
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	pH: 7 Preservative: 0.09% Sodium azide Constituents: 1.815% Tris, 1.764% Sodium citrate, 0.021% PBS
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee	Our **Abpromise guarantee** covers the use of ab70161 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★☆ (1)	1/1000 - 1/5000. Detects a band of approximately >460 kDa (predicted molecular weight: 481 kDa).
IHC-P		Use a concentration of 5 µg/ml. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
IP		Use at 2-10 µg/mg of lysate.

Target

Function
E3 ubiquitin-protein ligase which mediates ubiquitination and subsequent proteasomal degradation of target proteins. Regulates apoptosis by catalyzing the polyubiquitination and degradation of MCL1. Mediates monoubiquitination of DNA polymerase beta (POLB) at 'Lys-41', 'Lys-61' and 'Lys-81', thereby playing a role in base-excision repair. Also ubiquitinates the p53/TP53 tumor suppressor and core histones including H1, H2A, H2B, H3 and H4. Binds to an upstream initiator-like sequence in the preprodynorphin gene. Regulates neural differentiation and proliferation by catalyzing the polyubiquitination and degradation of MYCN. May regulate abundance of CDC6 after DNA damage by polyubiquitinating and targeting CDC6 to degradation.

Tissue specificity
Weakly expressed in heart, brain and placenta but not in other tissues. Expressed in a number of cell lines, predominantly in those from colorectal carcinomas.

Pathway
Protein modification; protein ubiquitination.

Involvement in disease
Defects in HUWE1 are the cause of mental retardation syndromic X-linked Turner type (MRXST) [MIM:300706]; also known as mental retardation and macrocephaly syndrome. MRXST shows clinical variability. Associated phenotypes include macrocephaly and variable contractures.
A chromosomal microduplication involving HUWE1 and HSD17B10 is the cause of mental retardation X-linked type 17 (MRX17) [MIM:300705]; also known as mental retardation X-linked type 31 (MRX31). Mental retardation is characterized by significantly sub-average general intellectual functioning associated with impairments in adaptative behavior and manifested during the developmental period. In contrast to syndromic or specific X-linked mental retardation which also present with associated physical, neurological and/or psychiatric manifestations, intellectual deficiency is the only primary symptom of non-syndromic X-linked mental retardation.

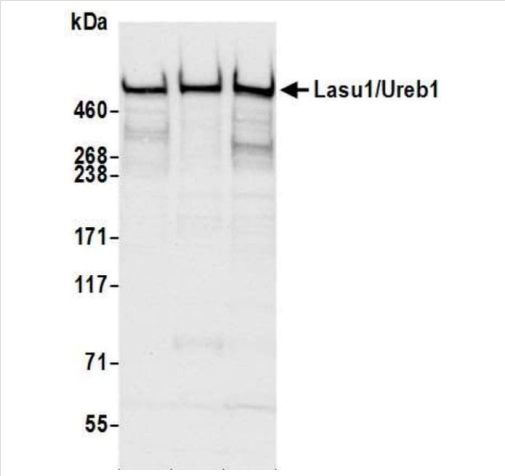
Sequence similarities
Belongs to the TOM1/PTR1 family.
Contains 1 HECT (E6AP-type E3 ubiquitin-protein ligase) domain.
Contains 1 UBA domain.
Contains 1 UIM (ubiquitin-interacting motif) repeat.
Contains 1 WWE domain.

Domain
The HECT domain mediates inhibition of the transcriptional activity of p53.

Post-translational modifications
Phosphorylated on tyrosine; phosphorylation is probably required for its ability to inhibit TP53 transactivation.
Phosphorylated upon DNA damage, probably by ATM or ATR.

Cellular localization
Cytoplasm. Nucleus. Mainly expressed in the cytoplasm of most tissues, except in the nucleus of spermatogonia, primary spermatocytes and neuronal cells (By similarity). Predominantly cytosolic or perinuclear in some colorectal carcinoma cells.

Images



Western blot - Anti-HUWE1/Mule antibody (ab70161)

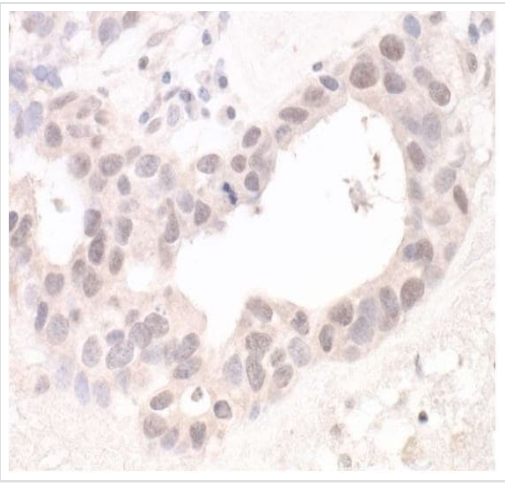
All lanes : Anti-HUWE1/Mule antibody (ab70161) at 1/10000 dilution

Lane 1 : HeLa Whole cell lysate
Lane 2 : HEK293T Whole cell lysate
Lane 3 : Jurkat Whole cell lysate

Lysates/proteins at 50 µg per lane.

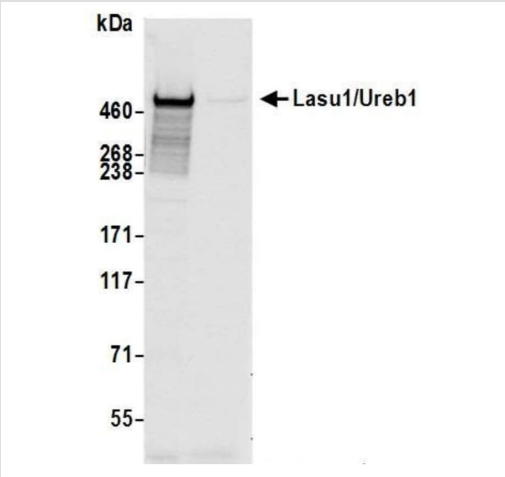
Predicted band size: 481 kDa

Detection: Chemiluminescence with an exposure time of 3 seconds.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HUWE1/Mule antibody (ab70161)

Immunohistochemical analysis of Formalin/PFA-fixed paraffin-embedded section of human ovarian carcinoma tissue labelling HUWE1/Mule with ab70161 at 1/5000 (0.2µg/ml). Detection: DAB.

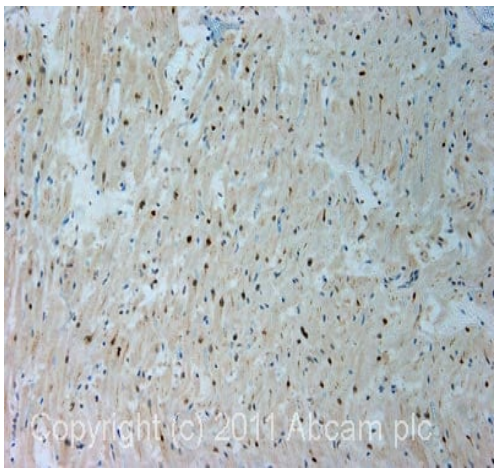


Immunoprecipitation - Anti-HUWE1/Mule antibody (ab70161)

HUWE1/Mule was immunoprecipitated from HeLa whole cell lysate with 6 µg/mg lysate. Western blot was performed from the immunoprecipitate using ab70161 at 1 µg/ml dilution.

Lane 1: ab70161 IP in HeLa whole cell lysate.

Lane 2: Control IgG IP in HeLa whole cell lysate.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HUWE1/Mule antibody (ab70161)

IHC image of ab70161 staining in human normal heart formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. The section was pre-treated using heat mediated antigen retrieval with EDTA (pH9, epitope retrieval solution 2) for 20 mins. The section was then incubated with ab70161, 5µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

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