abcam

ab314065

Anti-Lasu1/Ureb1 antibody [BLR129H] - BSA free

Recombinant

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.8 - 8.6 Preservative: 0.09% Sodium azide Constituents: 98% Borate buffered saline
Form	Liquid
Clonality	Monoclonal
Immunogen	Synthetic Peptide within Human HUWE1 aa 2250 to C-terminus. The exact immunogen used to generate this antibody is proprietary information. Database link Q7Z6Z7
Clone number	BLR129H
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

ICC

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

IP

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

WB

Tested

Species	Human, Mouse
Dilution info	-
Notes	-

Target data

See full target information HUWE1

Function

E3 ubiquitin-protein ligase which mediates ubiquitination and subsequent proteasomal degradation of target proteins (PubMed:15567145, PubMed:15767685, PubMed:15989957, PubMed:17567951, PubMed:18488021, PubMed:19037095, PubMed:19713937, PubMed:20534529, PubMed:30217973). Regulates apoptosis by catalyzing the polyubiquitination and degradation of MCL1 (PubMed:15989957). Mediates monoubiquitination of DNA polymerase beta (POLB) at 'Lys-41', 'Lys-61' and 'Lys-81', thereby playing a role in base-excision repair (PubMed:19713937). Also ubiquitinates the p53/TP53 tumor suppressor and core histones including H1, H2A, H2B, H3 and H4 (PubMed:15567145, PubMed:15767685, PubMed:15989956). Ubiquitinates MFN2 to negatively regulate mitochondrial fusion in response to decreased stearoylation of TFRC (PubMed:26214738). Ubiquitination of MFN2 also takes place following induction of mitophagy; AMBRA1 acts as a cofactor for HUWE1-mediated ubiquitination (PubMed:30217973). Regulates neural differentiation and proliferation by catalyzing the polyubiquitination and degradation of MYCN (PubMed:18488021). May regulate abundance of CDC6 after DNA damage by polyubiquitinating and targeting CDC6 to degradation (PubMed:17567951). Mediates polyubiquitination of isoform 2 of PA2G4 (PubMed:19037095). Acts in concert with MYCBP2 to regulate the circadian clock gene expression by promoting the lithium-induced ubiquitination and degradation of NR1D1 (PubMed:20534529). Binds to an upstream initiator-like sequence in the preprodynorphin gene (By similarity).

Mediates HAPSTR1 degradation, but is also a required cofactor in the pathway by which HAPSTR1 governs stress signaling (PubMed:35776542). Acts as a regulator of the JNK and NF-kappa-B signaling pathways by mediating assembly of heterotypic 'Lys-63'-/'Lys-48'-linked branched ubiquitin chains that are then recognized by TAB2: HUWE1 mediates branching of 'Lys-48'-linked chains of substrates initially modified with 'Lys-63'-linked conjugates by TRAF6 (PubMed:27746020). 'Lys-63'-/'Lys-48'-linked branched ubiquitin chains protect 'Lys-63'-linkages from CYLD deubiquitination (PubMed:27746020). Ubiquitinates PPARA in hepatocytes (By similarity).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	Up to 12 months
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

REACH authorisation
Abcam has not and does not intend to apply for the REACH Authorisation of customers' uses of products that contain European Authorisation list (Annex XIV) substances.
It is the responsibility of our customers to check the necessity of application of REACH Authorisation, and any other relevant authorisations, for their intended uses.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	The protein HUWE1 also known as Mule Mule HRP or Mule Mouse is a large HECT domain E3 ubiquitin ligase with a molecular weight of approximately 437 kDa. It functions by attaching ubiquitin to substrate proteins marking them for degradation via the proteasome pathway. HUWE1 is expressed ubiquitously in tissues but shows higher expression levels in brain testis and certain cancers. It regulates protein homeostasis highlighting its importance in cellular processes.
Biological function summary	HUWE1/Mule modulates various cellular functions through its ubiquitin ligase activity. It is not a part of a larger complex but interacts with numerous proteins influencing cell cycle regulation apoptosis and DNA repair. Its role in apoptosis involves facilitating the degradation of the pro-apoptotic protein Mcl-1 thereby promoting cell death. Additionally HUWE1 contributes to DNA repair by targeting

	histone H2AX for modification which is an important step in the DNA damage response.
Pathways	HUWE1 acts within the ubiquitin-proteasome system and the DNA damage response pathway. In the ubiquitin-proteasome system HUWE1 closely interacts with proteins such as p53 and c-Myc playing a significant role in regulating their stability and function. In the DNA damage response pathway the protein's activity affects the signaling required for cell cycle checkpoints underlining its relevance in maintaining genomic stability.
Associated diseases and disorders	HUWE1 mutations and dysregulation link to intellectual disability and certain cancers. Its association with intellectual disability arises from alterations in neural gene regulation partly through its interaction with proteins like p53. In cancer aberrant activity of HUWE1 results in uncontrolled proliferation as it affects the degradation of critical proteins involved in tumor progression such as c-Myc. Understanding HUWE1's mechanisms can provide insights into these conditions and potential therapeutic strategies.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

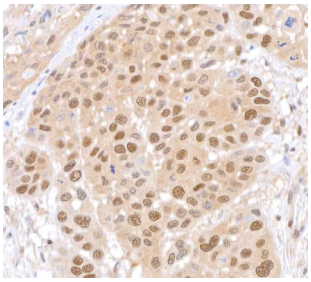
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

6 product images



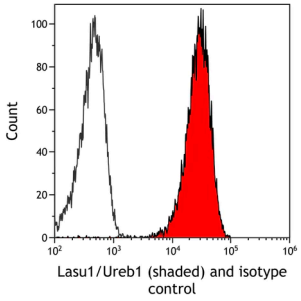
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Lasu1/Ureb1 antibody [BLR129H] - BSA free (ab314065)

Detection of human Lasu1/Ureb1 in FFPE head & neck SCC by immunohistochemistry. Antibody: Rabbit anti-Lasu1/Ureb1 recombinant monoclonal antibody [BLR129H] Secondary: HRP-conjugated goat anti-rabbit IgG Substrate: DAB.



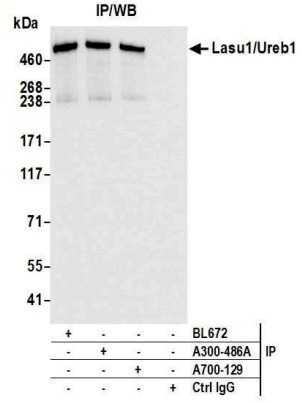
Immunocytochemistry - Anti-Lasu1/Ureb1 antibody [BLR129H] - BSA free (ab314065)

Detection of human Lasu1/Ureb1 in FFPE SiHa cells by immunocytochemistry. Antibody: Rabbit anti-Lasu1/Ureb1 recombinant monoclonal antibody [BLR129H] Secondary: HRP-conjugated goat anti-rabbit IgG Substrate: DAB.



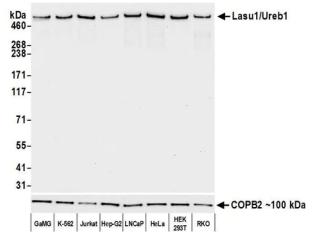
Flow Cytometry - Anti-Lasu1/Ureb1 antibody [BLR129H] - BSA free (ab314065)

Detection of human Lasu1/Ureb1 (shaded) in Jurkat cells by flow cytometry.Antibody: Rabbit anti-Lasu1/Ureb1 recombinant monoclonal antibody [BLR129H] or isotype control (unshaded). Secondary: DyLight® 650-conjugated goat anti-rabbit IgG (A120-101D5).



Immunoprecipitation - Anti-Lasu1/Ureb1 antibody [BLR129H] - BSA free (ab314065)

Detection of human Lasu1/Ureb1 by western blot of immunoprecipitates.Samples: Whole cell lysate (1 mg for IP; 5% of IP loaded) from HeLa cells prepared using NETN lysis buffer .Antibodies: Rabbit anti-Lasu1/Ureb1 recombinant monoclonal antibody [BLR129H] used for IP at 20 µl/mg lysate. Lasu1/Ureb1 was also immunoprecipitated by other Lasu1/Ureb1 antibodies A300-486A and BL672. For blotting immunoprecipitated Lasu1-Ureb1, A700-129 was used at 1:1000. Detection: Chemiluminescence with an exposure time of 3 seconds.



Western blot - Anti-Lasu1/Ureb1 antibody [BLR129H] - BSA free (ab314065)

Detection of human Lasu1/Ureb1 by western blot. Samples: Whole cell lysate (2 µg) from GaMG, K-562, Jurkat, Hep-G2, LNCaP, HeLa, HEK293T, and RKO cells prepared using NETN lysis buffer. Antibody: Rabbit anti-Lasu1/Ureb1 recombinant monoclonal antibody [BLR129H] used at 1:1000. Secondary: HRP-conjugated goat anti-rabbit IgG. Detection: Chemiluminescence with an exposure time of 10 seconds. Lower Panel: Rabbit anti-COPB2 antibody.
All lanes:
Western blot - Anti-Lasu1/Ureb1 antibody [BLR129H] - BSA free (ab314065) at 1/1000 dilution

Lane 1:
GaMG Whole cell lysate at 2 µg

Lane 2:
K-562 Whole cell lysate at 2 µg

Lane 3:
Jurkat Whole cell lysate at 2 µg

Lane 4:
Hep-G2 Whole cell lysate at 2 µg

Lane 5:
LNCaP Whole cell lysat at 2 µg

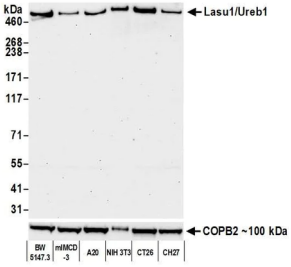
Lane 6:
HeLa Whole cell lysate at 2 µg

Lane 7:
HEK293T Whole cell lysate at 2 µg

Lane 8:
RKO Whole cell lysate at 2 µg

Secondary

All lanes:
HRP-conjugated goat anti-rabbit IgG



Western blot - Anti-Lasu1/Ureb1 antibody [BLR129H] - BSA free (ab314065)

Detection of mouse Lasu1/Ureb1 by western blot. Samples:Whole cell lysate (20 µg) from BW5147.3, mIMCD-3, A20, NIH 3T3, CT26, and CH27 cells prepared using NETN lysis buffer. Antibody:Rabbit anti-Lasu1/Ureb1 recombinant monoclonal antibody [BLR129H] used at 1:1000. Secondary: HRP-conjugated goat anti-rabbit IgG. Detection: Chemiluminescence with an exposure time of 30 seconds. Lower Panel: Rabbit anti-COPB2 antibody.
All lanes:
Western blot - Anti-Lasu1/Ureb1 antibody [BLR129H] - BSA free (ab314065) at 1/1000 dilution

Lane 1:
BW5147.3 Whole cell lysate at 20 µg

Lane 2:
mIMCD-3 Whole cell lysate at 20 µg

Lane 3:
A20 Whole cell lysate at 20 µg

Lane 4:
NIH 3T3 Whole cell lysate at 20 µg

Lane 5:
CT26 Whole cell lysate at 20 µg

Lane 6:
CH27 Whole cell lysate at 20 µg

Secondary

All lanes:
HRP-conjugated goat anti-rabbit IgG

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