abcam

ab314555

Anti-V5 tag antibody [RM1083]

Lab Essentials | Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Multiclonal
Immunogens	The exact immunogen used to generate this antibody is proprietary information.
Clone number	RM1083
Purification technique	Affinity purification Protein A
Concentration	0.5393 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Tag
Dilution info	1/1000
Notes	-

IHC-P

Tested

Species	Tag
Dilution info	1/20000
Notes	-

ICC/IF

Tested

Species	Tag
Dilution info	1/500
Notes	-

Flow Cyt (Intra)

Tested

Species	Tag
Dilution info	1/500
Notes	-

IP

Tested

Species	Tag
Dilution info	1/30
Notes	-

Target data

See full target information V5 tag

Storage

Shipped at conditions Blue Ice

Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What are recombinant multiclonals?
Recombinant multiclonals are a mixture of recombinant antibodies co-expressed from a library of heavy and light chains. They offer several advantages including:

- The sensitivity of polyclonal antibodies by recognising multiple epitopes
- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

View our range of recombinant multiclonal antibodies.

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

Supplementary info

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

Activity summary	The V5 tag is an epitope tag derived from the P and V fusion proteins of the paramyxovirus. It typically measures around 14 amino acids in length and is often used in molecular biology for tagging and protein expression studies. In terms of mechanical function the V5 tag facilitates the detection characterization and purification of recombinant proteins. Scientists commonly use it in various hosts such as bacteria yeast and mammalian cells due to its convenient integration into larger protein complexes. Unlike native proteins it serves as a non-disruptive label for identifying proteins without affecting their functionality.
Biological function summary	Researchers employ the V5 tag to decipher protein localization expression and role within cellular environments. It allows easy tracking in situ by using antibodies that target the V5 epitope such as the anti-V5 antibody. The V5 tag proves effective in dual-tagging systems useful in elucidating protein interactions and complex

	formations for instance when combined with other tags like biotin tag or APC tag. This assists in isolating and identifying components of complex cellular machinery.
Pathways	The tag is frequently utilized in studies exploring functional pathways of various proteins across metabolic and signaling pathways. It aids in examining the relationship between proteins within signaling cascades by tagging proteins that interact with others such as those in the PK tag-related signaling pathways. Researchers often track proteins across intricate networks to understand cellular processes intricately using V5-tagged proteins as indicators or reporters.
Associated diseases and disorders	Scientists harness the V5 tag to investigate the expression and interactions of proteins associated with certain conditions such as cancer and neurodegenerative diseases. Through its integration scientists aim to uncover alterations in protein interactions or localizations that contribute to disease progression. For example they may tag proteins linked to cancer pathways observing how disruptions in proteins related to anti-V5 targets could provide insights into tumor biology or pathogenesis.

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

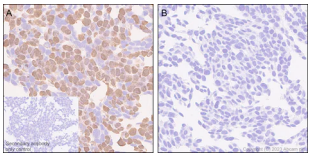
We do not recommend this combination. It is not covered by our product promise.

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.

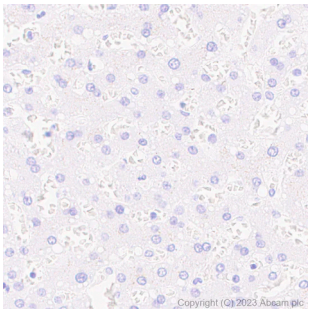
8 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-V5 tag antibody [RM1083] (ab314555)

V5 tag Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-V5 tag antibody

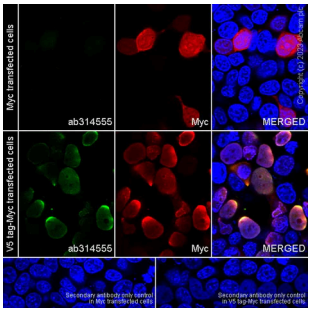
Immunohistochemical analysis of paraffin-embedded (A) HEK-293T (human epithelial cell line from embryonic kidney) transfected with a CBX1-V5-tagged expression vector containing a His-tag. (B) HEK-293T transfected with empty vector containing a His-tag. Tissue labeling V5 tag with ab314555 at 1/20000 (0.027 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Positive staining on (A) HEK-293T transfected with a CBX1-V5-tagged expression vector containing a His-tag. No staining on (B) HEK-293T transfected with empty vector containing a His-tag. The section was incubated with ab314555 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Heat mediated antigen retrieval was performed with Citrate buffer (pH 6.0, Epitope Retrieval Solution 1) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-V5 tag antibody [RM1083] (ab314555)

V5 tag Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human liver using rabbit Anti-V5 tag antibody

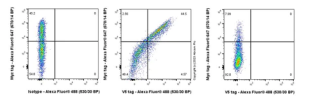
Immunohistochemical analysis of paraffin-embedded human liver tissue labeling V5 tag with ab314555 at 1/20000 (0.027 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Negative control: no staining on human liver. The section was incubated with ab314555 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Heat mediated antigen retrieval was performed with Citrate buffer (pH 6.0, Epitope Retrieval Solution 1) for 20 mins.



Immunocytochemistry/ Immunofluorescence - Anti-V5 tag antibody [RM1083] (ab314555)

V5 tag Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-V5 tag antibody

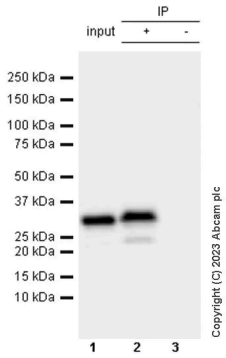
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized HEK-293T (human epithelial cell line from embryonic kidney) transfected with a CBX1-V5-tagged expression vector containing a His-tag. cells labelling V5 tag with ab314555 at 1/500 (1.08 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1015 (2ug/ml) dilution (Green). Confocal image showing nuclear staining in 293T cells transfected with V5 tag protein expression vector containing a myc tag, no staining on HEK-293T transfected with empty vector containing a His-tag. Image was taken with a confocal microscope(Leica-Microsystems, TCS SP8). ab223895 Anti-Myc tag Mouse monoclonal antibody (Alexa Fluor® 647) was used to counterstain at 1/100 (5ug/ml) dilution (Red). The Nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1015 (2ug/ml) dilution.



Flow Cytometry (Intracellular) - Anti-V5 tag antibody [RM1083] (ab314555)

V5 tag Flow Cytometry (Intracellular) staining using rabbit Anti-V5 tag antibody

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized Isotype (Left) / 293T cells transfected with V5 tag protein expression vector containing a myc tag (Middle) / 293T cells transfected with empty protein expression vector containing a myc tag (Right) cells labelling V5 tag with ab314555 at 1/500 dilution (0.1 ug)/Middle and Right compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody. Cells are co-stained with Myc tag conjugated to Alexa Fluor®647.



Immunoprecipitation - Anti-V5 tag antibody [RM1083] (ab314555)

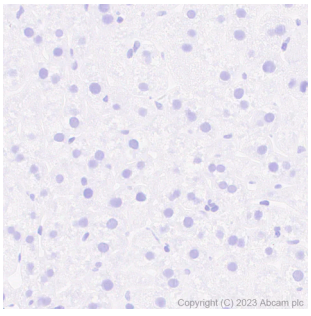
V5 tag was immunoprecipitated from 0.35 mg 293T cells transfected with a human CBX expression vector containing a myc-His-V5-tag, whole cell lysate with ab314555 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab314555 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)(ab131366) was used at 1/5000 dilution. Lane 1: 293T cells transfected with a human CBX expression vector containing a myc-His-V5-tag, whole cell lysate Lane 2: ab314555 IP in 293T cells transfected with a human CBX expression vector containing a myc-His-V5-tag, whole cell lysate Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab314555 in 293T cells transfected with a human CBX expression vector containing a myc-His-V5-tag, whole cell lysate Blocking and dilution buffer and concentration: 5% NFDM/TBST.
All lanes:
Immunoprecipitation - Anti-V5 tag antibody [RM1083] (ab314555) at 1/30 dilution

All lanes:
293T cells transfected with a human CBX expression vector containing a myc-His-V5-tag, whole cell lysate

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

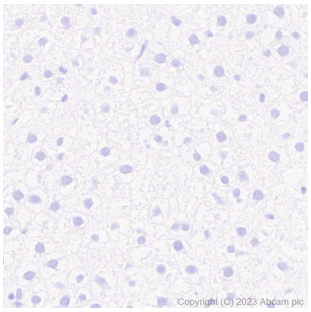
Exposure time: 3s



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-V5 tag antibody [RM1083] (ab314555)

V5 tag Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Mouse liver using rabbit Anti-V5 tag antibody

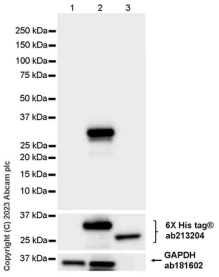
Immunohistochemical analysis of paraffin-embedded mouse liver tissue labeling V5 tag with ab314555 at 1/20000 (0.027 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Negative control: no staining on mouse liver. The section was incubated with ab314555 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Heat mediated antigen retrieval was performed with Citrate buffer (pH 6.0, Epitope Retrieval Solution 1) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-V5 tag antibody [RM1083] (ab314555)

V5 tag Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Rat liver using rabbit Anti-V5 tag antibody

Immunohistochemical analysis of paraffin-embedded rat liver tissue labeling V5 tag with ab314555 at 1/20000 (0.027 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Negative control: no staining on rat liver. The section was incubated with ab314555 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Heat mediated antigen retrieval was performed with Citrate buffer (pH 6.0, Epitope Retrieval Solution 1) for 20 mins.



Western blot - Anti-V5 tag antibody [RM1083] (ab314555)

Blocking and diluting buffer and concentration: 5% NFDM/TBST In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution. In Western blot, Anti-6X His tag® antibody [EPR20547] - ChIP Grade (ab213204) staining at 1/5000 dilution.
All lanes:
Western blot - Anti-V5 tag antibody [RM1083] (ab314555) at 1/1000 dilution

Lane 1:
293T cells transfected with an empty vector containi a myc-His-tag, whole cell lysate at 20 µg

Lane 2:
293T cells transfected with a human CBX expression vector containi a myc-His-V5-tag, whole cell lysate at 20 µg

Lane 3:
His-tagged human Chromobox protein homolog 1 recombinant protein at 0.05 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 27 kDa

Exposure time: 6s

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