abcam

ab245114

# Anti-6X His tag® antibody [JPAR-2]

Anti-6X His tag® antibody [JPAR-2] (ab245114) is a rabbit monoclonal antibody detecting 6X His tag® in **Western Blot, Flow Cytometry, IP, IHC-P**.

- Biophysical QC for unrivalled batch-batch consistency

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** | Monoclonal |
| **Immunogen** | The exact immunogen used to generate this antibody is proprietary information. |
| **Clone number** | JPAR-2 |
| **Purification technique** | Affinity purification Protein A |
| **Concentration** | 0.489 - 0.518 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

### IP

#### Tested

| | |
|---|---|
| **Species** | Tag |
| **Dilution info** | 1/30 |

| | |
|---|---|
| **Notes** | - |

### Not recommended

| | |
|---|---|
| **Species** | Synthetic peptide |
| **Dilution info** | - |
| **Notes** | - |

## IHC-P

### Tested

| | |
|---|---|
| **Species** | Tag |
| **Dilution info** | 1/500 |
| **Notes** | Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. |

### Not recommended

| | |
|---|---|
| **Species** | Synthetic peptide |
| **Dilution info** | - |
| **Notes** | - |

## Flow Cyt

### Tested

| | |
|---|---|
| **Species** | Tag |
| **Dilution info** | 1/500 |
| **Notes** | - |

### Not recommended

| | |
|---|---|
| **Species** | Synthetic peptide |
| **Dilution info** | - |
| **Notes** | - |

## WB

### Tested

| | |
|---|---|
| **Species** | Tag |
| **Dilution info** | 1/1000 |
| **Notes** | - |

### Not recommended

| | |
|---|---|
| **Species** | Synthetic peptide |
| **Dilution info** | - |
| **Notes** | - |

## ICC/IF

### Not recommended

| | |
|---|---|
| **Species** | Synthetic peptide, Tag |
| **Dilution info** | - |
| **Notes** | - |

## Target data

See full target information 6X His tag®

## Storage

| | |
|---|---|
| **Shipped at conditions** | Conditional Ambient |
| **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 is this antibody validated in?**
Anti-6X His tag® antibody [JPAR-2] (ab245114) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Flow Cyt), Immunoprecipitation (IP), Immunohistochemistry (IHC-P).

**Tagged protein detection**
6X His tag® antibodies are used to visualize proteins labelled with this tag in a variety of applications.

**Other related products**
We have a range of other formats of antibody clone [JPAR-2] also available for your convenience: ab245114, Carrier free - ab245203

**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.

**What are the advantages of a recombinant monoclonal antibody?**
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

**Trial sizes available!**
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size antibodies.

## Supplementary info

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

| | |
|---|---|
| **Activity summary** | The 6X His tag is a sequence commonly used for protein purification detection and immobilization. It consists of six histidine residues that bind to metal ions like nickel or cobalt. This makes it a highly efficient tag for affinity chromatography. His tag antibodies such as anti-His HRP facilitate the detection of His-tagged proteins in various assays. Being a small tag with a typical molecular weight of about 0.84 kDa it minimally interferes with protein function. Many proteins expressed in E. coli and other expression systems carry the 6X His tag for ease of purification and analysis. |
| **Biological function summary** | Proteins tagged with the 6X His tag often play roles in studies involving recombinant proteins. The tag itself does not alter the biological function of the target protein. It is not part of any natural protein complex but aids in the study of |

| | |
|---|---|
| | such complexes. Researchers use His tag antibodies like anti-His to specifically target and study these tagged proteins without cross-reactivity to other proteins. |
| **Pathways** | The incorporation of the 6X His tag into proteins allows them to be studied more efficiently in various biological pathways. It can be part of pathways like signal transduction or metabolic pathways. When tagged proteins interact with other molecules such as kinases or receptors researchers can track these interactions using the tag and anti-Histidine antibodies. This technique informs on proteins that are hard to purify due to low abundance or instability. |
| **Associated diseases and disorders** | The 6X His tag itself does not have direct implications. However proteins of interest in disease models often carry the tag which allows researchers to purify and study them in detail. For example cancer-related proteins may be expressed with a His tag to understand their role in tumorigenesis. Similarly proteins involved in metabolic disorders could be tagged which helps in analyzing specific interactions or functions disrupted in diseases. |

## 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**

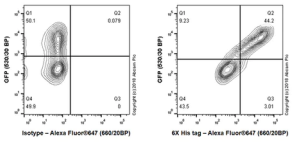
We do not recommend this combination. It is not covered by our product promise.

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.

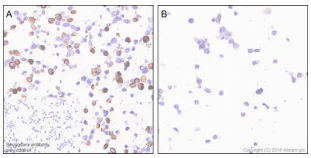
## 4 product images



## Flow Cytometry - Anti-6X His tag® antibody [JPAR-2] (ab245114)

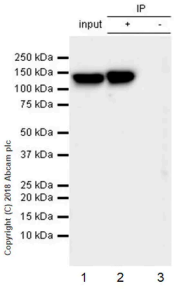
6X His tag® Flow Cytometry staining using rabbit Anti-6X His tag® antibody

Flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol-permeabilized HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) transfected with a His-tagged Staphylococcus aureus cas9 (J7RUA5) construct labeling 6X His tag® with ab245114 at 1/500 (Right) compared with a Rabbit monoclonal IgG isotype control (ab172730) (Left). Goat Anti-Rabbit IgG H&L (Alexa Fluor® 647) (ab150079), at 1/2000 dilution was used as the secondary antibody.



## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-6X His tag® antibody [JPAR-2] (ab245114)

Immunohistochemical analysis of paraffin-embedded HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) labeling 6X His tag® with ab245114 at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ready to use. Positive staining on **(A)** HEK-293T transfected with a 6× His tag construct is observed. No staining on **(B)** HEK-293T transfected with an empty plasmid is observed. Counterstained with hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) ready to use.
Heat mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0).



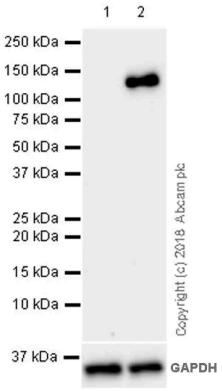

## Immunoprecipitation - Anti-6X His tag® antibody [JPAR-2] (ab245114)

His-tagged Staphylococcus aureus cas9 (J7RUA5; aa 1-1053; 125kDa) was immunoprecipitated from 0.35 mg of HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) (transfected with Staphylococcus aureus cas9 (J7RUA5; aa 1-1053; 125kDa)) whole cell lysate with ab245114 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab245114 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/5000 dilution.
**Lane 1:** HEK-293T transfected with a His-tagged Staphylococcus aureus cas9 whole cell lysate 10 µg (Input).
**Lane 2:** ab245114 IP in HEK-293T transfected with a His-tagged Staphylococcus aureus cas9 whole cell lysate.
**Lane 3:** Rabbit monoclonal IgG (ab172730) instead of ab245114 in HEK-293T transfected with a His-tagged Staphylococcus aureus cas9 whole cell lysate.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.
Exposure time: 30 seconds.

All lanes:
Immunoprecipitation - Anti-6X His tag® antibody [JPAR-2] (ab245114)

Observed band size: 125 kDa




# Western blot - Anti-6X His tag® antibody [JPAR-2] (ab245114)

Blocking and dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-6X His tag® antibody [JPAR-2] (ab245114) at 1/1000 dilution

Lane 1:
HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) transfected with an empty plasmid, whole cell lysate at 20 µg

Lane 2:
HEK-293T transfected with a His-tagged Staphylococcus aureus cas9 (J7RUA5; aa 1-1053; 125kDa) construct, whole cell lysate at 20 µg

Secondary

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

Observed band size: 125 kDa

Exposure time: 15s

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