abcam

ab5000

Anti-6X His tag® antibody [4D11]

Lab Essentials

Key facts

Isotype	IgG2a
Host species	Mouse
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 6.97% L-Arginine
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	4D11
Purification technique	Affinity purification
Epitope	This antibody was shown to recognize an epitope (HHHHHHGS) encoded by the polylinker of several expression vectors (including pDS:RBSII, pQE-30, and pQE-50).
Light chain type	kappa
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Expected

Species	Tag

Dilution info	-
Notes	See Abreview.

Flow Cyt

Expected

Species	Tag
Dilution info	-
Notes	ab170191 - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody.

ELISA

Expected

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

Dot

Expected

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

WB

Tested

Species	Tag
Dilution info	-
Notes	-

ICC/IF

Expected

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

AP

Expected

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

Target data

See full target information 6X His 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	Add glycerol to a final volume of 50% for extra stability and aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Want a custom formulation?
This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com

HIS-TAG® is a trademark of EMD Biosciences, Inc.

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.

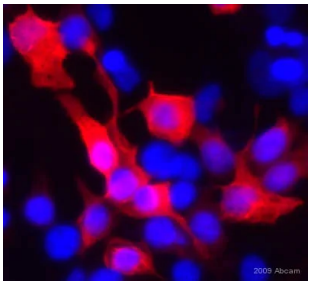
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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

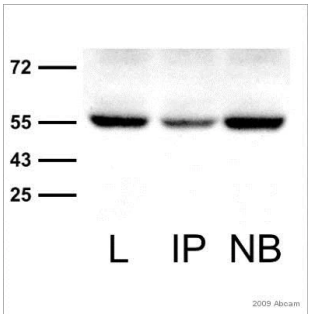


This image is courtesy of a customer review submitted by Dr Vladimir Milenkovic

Immunocytochemistry/ Immunofluorescence - Anti-6X His tag® antibody [4D11] (ab5000)

6X His tag® Immunocytochemistry/ Immunofluorescence staining using mouse Anti-6X His tag® antibody

ab5000 staining Human HEK 293 cells transfected with CACNB3-His by ICC/IF. Cells were PFA fixed and permeabilized in 0.5% Triton X-100 prior to blocking in 5% serum for 20 minutes at 25°C. The primary antibody (1/250 in 1% goat serum, 0.1% TX100, 1X PBS) was incubated with the sample for 16 hours at 4°C. An Alexa Fluor® 546 conjugated goat anti-mouse antibody (1/500) was used as the secondary. DAPI was used for nuclei staining (blue).



This image is courtesy of a customer review submitted by Dr Vladimir Milenkovic

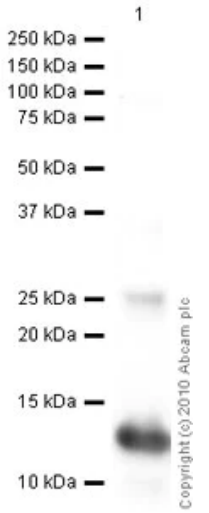
Immunoprecipitation - Anti-6X His tag® antibody [4D11] (ab5000)

ab5000 Immunoprecipitate in human HEK293 whole cell lysate. 25µg of cell lysate incubated with primary antibody (undiluted) and matrix (Protein G) for 16 hours at 4°C. For western blotting an undiluted HRP-Goat anti-rabbit IgG polyclonal was used. Beta3-His fusion protein was immunoprecipitated using anti His Ab, and specific beta3a band (56kDa) was detected using anti beta3 Ab
Lane 1. Lysate of HEK293 cells expressing beta3-His (CACNB3)

Lane 2. IP with anti His Ab

Lane 3. Non bound fraction

All lanes:
Immunoprecipitation - Anti-6X His tag® antibody [4D11] (ab5000)



Western blot - Anti-6X His tag® antibody [4D11] (ab5000)

All lanes:
Western blot - Anti-6X His tag® antibody [4D11] (ab5000) at 1/1000 dilution

All lanes:
6X His Tagged Protein at 1 µg

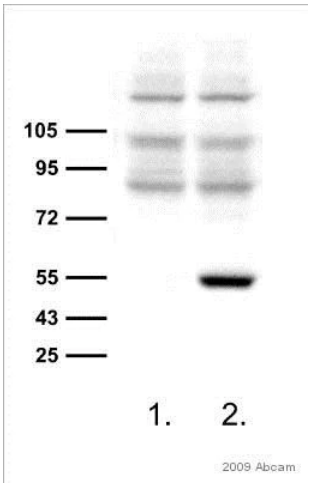
Secondary

All lanes:
Goat polyclonal to Mouse IgG - H&L - Pre-Adsorbed (HRP) (ab65485) at 1/3000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Exposure time: 30s



This image is courtesy of a customer review submitted by Dr Vladimir Milenkovic

Western blot - Anti-6X His tag® antibody [4D11] (ab5000)

All lanes:
Western blot - Anti-6X His tag® antibody [4D11] (ab5000) at 1/2000 dilution

Lane 1:
Lysates prepared from HEK-293 cells

Lane 2:
Lysates prepared from HEK-293 cells transfected with Beta3-His (CACNB3)

Secondary

All lanes:
HRP-conjugated goat anit-mouse IgG polyclonal at 1/5000 dilution

---

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