abcam

ab179802

Anti-HSPC150/UBE2T antibody [EP9447]

Recombinant | RabMAb

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	EP9447
Purification technique	Affinity purification Protein A
Concentration	0.102 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/20
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/20
Notes	-

WB

Tested

Species	Human
Dilution info	1/10000
Notes	-

IHC-P

Not recommended

Species	Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/50
Notes	-

Target data

See full target information UBE2T

Function Accepts ubiquitin from the E1 complex and catalyzes its covalent attachment to other proteins. Catalyzes monoubiquitination. Involved in mitomycin-C (MMC)-induced DNA repair. Acts as a specific E2 ubiquitin-conjugating enzyme for the Fanconi anemia complex by associating with E3 ubiquitin-protein ligase FANCL and

catalyzing monoubiquitination of FANCD2, a key step in the DNA damage pathway (PubMed:16916645, PubMed:17938197, PubMed:19111657, PubMed:19589784, PubMed:28437106). Also mediates monoubiquitination of FANCL and FANCI (PubMed:16916645, PubMed:17938197, PubMed:19111657, PubMed:19589784). May contribute to ubiquitination and degradation of BRCA1 (PubMed:19887602). In vitro able to promote polyubiquitination using all 7 ubiquitin Lys residues, but may prefer 'Lys-11'-, 'Lys-27'-, 'Lys-48'- and 'Lys-63'-linked polyubiquitination (PubMed:20061386).

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

The production method for this product has been changed from hybridoma to recombinant on 15th April 2024.

Species reactivity
Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

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.

Supplementary info

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

Activity summary	HSPC150 also known as UBE2T is a protein involved in the ubiquitination process. It functions as a ubiquitin-conjugating enzyme essential for tagging proteins with ubiquitin marking them for degradation via the proteasome. UBE2T has a mass of approximately 22 kDa and shows expression in various tissues with higher levels found in the testis and bone marrow. It is critical in maintaining protein homeostasis by regulating the turnover of proteins within cells.
Biological function summary	HSPC150/UBE2T interacts with the Fanconi anemia (FA) complex playing a significant role within DNA repair processes. Its activity is necessary for mono-ubiquitination of the FANCD2 protein a central component of the FA pathway. Through this engagement UBE2T contributes to the repair of interstrand crosslinks in DNA therefore supporting the maintenance of genomic integrity. The protein's involvement in these processes highlights its importance in preserving proper cellular functions and preventing genomic instability.
Pathways	HSPC150/UBE2T is mainly involved in the DNA damage repair pathways particularly the Fanconi anemia pathway. In this context it collaborates with proteins like FANCL and RAD51 which are key players in homologous recombination and DNA repair. Ubiquitination of FANCD2 by UBE2T integrates into these pathways facilitating efficient DNA repair and ensuring cell survival following genotoxic stress.
Associated diseases and disorders	Dysfunction of HSPC150/UBE2T links to cancer particularly with certain hematological malignancies. Alterations or overexpression of UBE2T can lead to defective DNA repair contributing to carcinogenesis due to accumulation of DNA damage. Furthermore associations with Fanconi anemia also illustrate its vital role given that mutations affecting UBE2T can hinder the pathway's function leading to bone marrow failure and increased cancer risk. The interaction with FANCD2 emphasizes its potential impact in conditions associated with genomic instability.

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

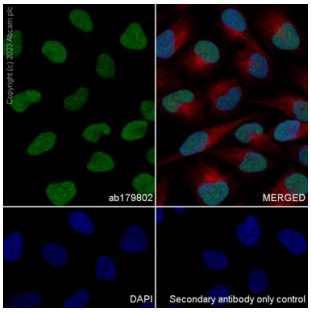
We do not recommend this combination. It is not covered by our product promise.

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

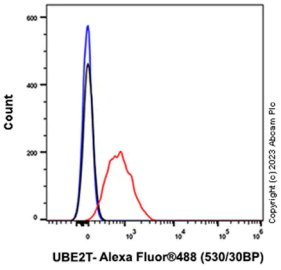


Immunocytochemistry/ Immunofluorescence - Anti-HSPC150/UBE2T antibody [EP9447] (ab179802)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized HeLa cells labelling HSPC150/UBE2T with ab179802 at 1/50 (2 ug/ml) dilution, followed by AlexaFluor® 488-conjugated Goat anti-Rabbit secondary antibody (ab150081) at 1/1000 dilution at RT for 45 min. (Green).

Confocal image showing nuclear staining in HeLa cells (shown in green). ab195889 AlexaFluor® 594-conjugated Anti-alpha Tubulin, used as a counterstain at 1/200 dilution, was co-incubated with ab179802 overnight at 4° C. Nuclear DNA was labeled with DAPI (shown in blue).

Secondary antibody only control: Secondary antibody is AlexaFluor® 488-conjugated Goat anti-Rabbit secondary antibody (ab150081) at 1/1000 dilution.



Flow Cytometry (Intracellular) - Anti-HSPC150/UBE2T antibody [EP9447] (ab179802)

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized HeLa cells labelling HSPC150/UBE2T with ab179802 at 1/20 dilution (5 ug/ml).

Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150081) was used as a secondary antibody.



Immunoprecipitation - Anti-HSPC150/UBE2T antibody [EP9447] (ab179802)

HSPC150/UBE2T was immunoprecipitated from 0.35 mg HeLa whole cell lysate with ab179802 at 1/20 dilution (0.5ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab179802 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used as secondary antibody at 1/5000 dilution.

All lanes:
Immunoprecipitation - Anti-HSPC150/UBE2T antibody [EP9447] (ab179802) at 1/1000 dilution

Lane 1:
HeLa (human cervical adenocarcinoma epithelial cell), whole cell lysate at 10 µg

Lane 2:
HeLa cell lysate

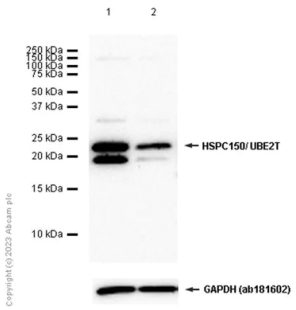
Lane 3:
Rabbit monoclonal IgG (ab172730) instead of ab179802 in HeLa whole cell lysate

Secondary

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

Predicted band size: 23 kDa

Exposure time: 15s



Western blot - Anti-HSPC150/UBE2T antibody [EP9447] (ab179802)

An approximately 19 kDa band is observed but we are not sure how do define it

ab181602 was used as a GAPDH loading control.

Blocking and diluting buffer and concentration: 5% NFDM/TBST.

All lanes:
Western blot - Anti-HSPC150/UBE2T antibody [EP9447] (ab179802) at 1/10000 dilution

Lane 1:
A375 (Human malignant melanoma epithelial cell) whole cell lysate at 15 µg

Lane 2:
U-87 MG (Human glioblastoma-astrocytoma epithelial cell) whole cell lysate at 15 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 23 kDa

Exposure time: 180s

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