abcam

ab202901

Anti-OSTF1 antibody [EP15457]

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	EP15457
Purification technique	Affinity purification Protein A
Concentration	0.476 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

WB

Tested

Species	Human
Dilution info	1/5000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/250
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/100
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/500
Notes	-

Target data

See full target information Osteoclast-stimulating factor 1

Function	Induces bone resorption, acting probably through a signaling cascade which results in the secretion of factor(s) enhancing osteoclast formation and activity.

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

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	OSTF1 also known as Osteoclast-Stimulating Factor 1 is an important protein involved in the regulation of bone resorption. It has a molecular weight of approximately 60 kDa. OSTF1 is widely expressed in bone tissues where it influences the activity of osteoclasts. Researchers have identified it as a cytoplasmic protein that plays a role in signaling processes. OSTF1 functions as an adapter protein linking other proteins involved in cellular functions related to bone metabolism.
Biological function summary	OSTF1 interacts with cytoskeleton-associated proteins to enhance osteoclast activity. It coordinates the assembly of protein complexes essential for cell movement and actin cytoskeleton organization. OSTF1 is known to engage in complex formations with proteins such as Src a tyrosine kinase that facilitates its

	regulatory activities in osteoclasts. This interaction highlights OSTF1's role in the dynamics of cell adhesion and mobility which are important for bone remodeling processes.
Pathways	OSTF1 plays a role in the RANK/RANKL/OPG signaling pathway an important pathway for bone homeostasis. It partners with the Src protein in this pathway influencing osteoclast differentiation and activation. Besides OSTF1 is linked to the integrin signaling pathway through its interactions with cytoskeleton components which is equally significant for cell adhesion and survival. By mediating these interactions OSTF1 helps modulate the balance between formation and breakdown of bone matrix.
Associated diseases and disorders	OSTF1 has associations with osteoporosis and Paget's disease of bone. In osteoporosis the deregulation of OSTF1 influences abnormal osteoclast activity leading to increased bone resorption and fragility. In Paget's disease OSTF1 may interact with other proteins like TNF receptor-associated factor 6 (TRAF6) affecting the excessive breakdown and formation of bone. The involvement of OSTF1 in these conditions makes it a target of interest for therapeutic interventions in bone 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

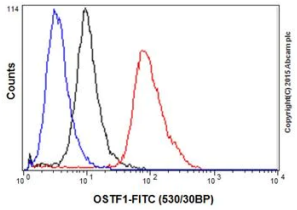
We do not recommend this combination. It is not covered by our product promise.

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.

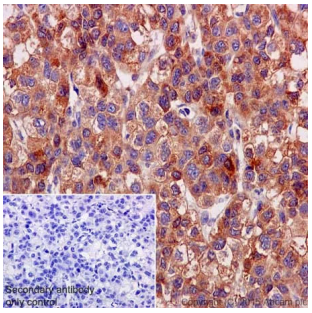
7 product images



Flow Cytometry (Intracellular) - Anti-OSTF1 antibody [EP15457] (ab202901)

OSTF1 Flow Cytometry (Intracellular) staining using rabbit Anti-OSTF1 antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed HeLa (Human epithelial cells from cervix adenocarcinoma) cells labeling OSTF1 with ab202901 at 1/100 dilution (red) compared with a rabbit monoclonal IgG isotype control (black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody; blue). Goat anti rabbit IgG (FITC) at 1/500 dilution was used as the secondary antibody.

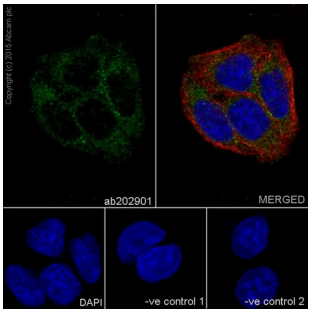


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-OSTF1 antibody [EP15457] (ab202901)

OSTF1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-OSTF1 antibody

Immunohistochemical analysis of paraffin-embedded Human hepatocellular carcinoma tissue labeling OSTF1 with ab202901 at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution. Cytoplasmic staining on Human hepatocellular carcinoma tissue is observed. Counter stained with Hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/500 dilution.

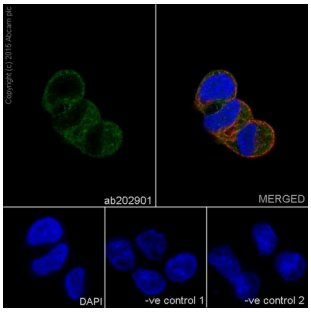
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-OSTF1 antibody [EP15457] (ab202901)

OSTF1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-OSTF1 antibody

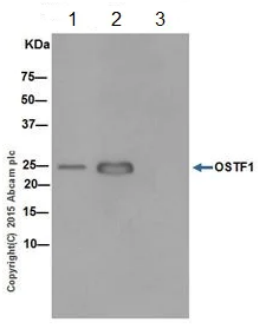
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (Human epithelial cells from cervix adenocarcinoma) cells labeling OSTF1 with ab202901 at 1/250 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic staining on HeLa cell line. The nuclear counterstain is DAPI (blue). Tubulin is detected with ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution and ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/1000 dilution (red).
The negative controls are as follows:-
-ve control 1: - ab202901 at 1/250 dilution followed by ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/1000 dilution.
-ve control 2: - ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution followed by ab150077 (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/1000 dilution.



Immunocytochemistry/ Immunofluorescence - Anti-OSTF1 antibody [EP15457] (ab202901)

OSTF1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-OSTF1 antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HepG2 (Human liver hepatocellular carcinoma) cells labeling OSTF1 with ab202901 at 1/250 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic staining on HepG2 cell line. The nuclear counterstain is DAPI (blue). Tubulin is detected with ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution and ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/1000 dilution (red).
The negative controls are as follows:-
-ve control 1: - ab202901 at 1/250 dilution followed by ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/1000 dilution.
-ve control 2: - ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution followed by ab150077 (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/1000 dilution.



Immunoprecipitation - Anti-OSTF1 antibody [EP15457] (ab202901)

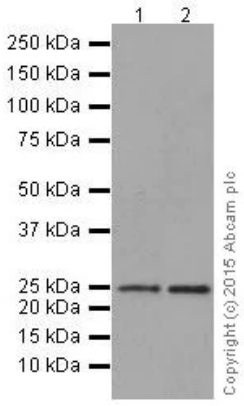
OSTF1 was immunoprecipitated from 1mg of MCF7 (Human breast adenocarcinoma cell line) whole cell lysate with ab202901 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab202901 at 1/1000 dilution. Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG, was used as secondary antibody at 1/1500 dilution.
Lane 1: MCF7 whole cell lysate 10µg (Input). Lane 2: ab202901 IP in MCF7 whole cell lysate. Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab202901 in MCF7 whole cell lysate.

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

Exposure time: 3 seconds.

All lanes:
Immunoprecipitation - Anti-OSTF1 antibody [EP15457] (ab202901)

Predicted band size: 24 kDa



Western blot - Anti-OSTF1 antibody [EP15457] (ab202901)

Blocking/dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-OSTF1 antibody [EP15457] (ab202901) at 1/5000 dilution

Lane 1:
Human fetal brain lysate at 10 µg

Lane 2:
Human fetal kidney lysate at 10 µg

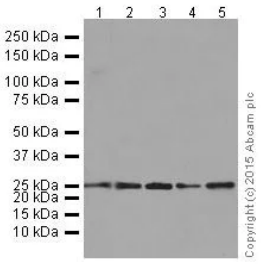
Secondary

All lanes:
Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/1000 dilution

Predicted band size: 24 kDa

Observed band size: 24 kDa

Exposure time: 3min



Western blot - Anti-OSTF1 antibody [EP15457] (ab202901)

OSTF1 Western blot staining using rabbit Anti-OSTF1 antibody

Blocking/dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-OSTF1 antibody [EP15457] (ab202901) at 1/5000 dilution

Lane 1:
HeLa (Human epithelial cells from cervix adenocarcinoma) whole cell lysate at 10 µg

Lane 2:
HepG2 (Human liver hepatocellular carcinoma) whole cell lysate at 10 µg

Lane 3:
MCF7 (Human breast carcinoma cell line) whole cell lysate at 10 µg

Lane 4:
Human fetal liver lysate at 10 µg

Lane 5:
Human tonsil lysate at 10 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/50000 dilution

Predicted band size: 24 kDa

Observed band size: 24 kDa

Exposure time: 30s

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