abcam

ab52864

Anti-M-CSF antibody [EP1179Y]

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	EP1179Y
Purification technique	Affinity purification Protein A
Specificity	This antibody fails to detect endogenous natural samples in WB.
Concentration	0.74 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/500
Notes	**For unpurified use at 1/50 - 1/100 dilution.**

Predicted

Species	Sheep, Cow, Chimpanzee
Dilution info	-
Notes	-

Not recommended

Species	Synthetic peptide - Human
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	1/40
Notes	**For unpurified use at 1/50 dilution.**

Predicted

Species	Sheep, Cow, Chimpanzee
Dilution info	-
Notes	-

Not recommended

Species	Synthetic peptide - Human
Dilution info	-
Notes	-

WB

Tested

Species	Synthetic peptide - Human
Dilution info	1/2000
Notes	This antibody fails to detect endogenous natural samples in WB.

Expected

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

Predicted

Species	Sheep, Cow, Chimpanzee
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	**For unpurified use at 1/250 - 1/500 dilution.**

Predicted

Species	Sheep, Cow, Chimpanzee
Dilution info	-
Notes	-

Not recommended

Species	Synthetic peptide - Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/80
Notes	-

Predicted

Species	Sheep, Cow, Chimpanzee
Dilution info	-
Notes	-

Not recommended

Species	Synthetic peptide - Human
Dilution info	-
Notes	-

Target data

See full target information CSF1

Function Cytokine that plays an essential role in the regulation of survival, proliferation and differentiation of hematopoietic precursor cells, especially mononuclear phagocytes, such as macrophages and monocytes. Promotes the release of pro-inflammatory chemokines, and thereby plays an important role in innate immunity and in inflammatory processes. Plays an important role in the regulation of osteoclast proliferation and differentiation, the regulation of bone resorption, and is required for normal bone development. Required for normal male and female fertility. Promotes reorganization of the actin cytoskeleton, regulates formation of membrane ruffles, cell adhesion and cell migration. Plays a role in lipoprotein clearance.

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

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	M-CSF or macrophage colony-stimulating factor is a cytokine involved in the regulation of macrophage production. Alternative names for M-CSF include CSF-1 and colony-stimulating factor 1. The M-CSF protein has a molecular mass of approximately 18 to 22 kDa. M-CSF is mainly expressed in various tissues including the placenta kidney and bone marrow. It functions as a homodimer important for the survival proliferation and differentiation of mononuclear phagocyte lineage cells.
Biological function summary	M-CSF influences the production differentiation and function of macrophages and osteoclasts. It is not part of a large complex but interacts with its receptor the CSF1R (colony-stimulating factor 1 receptor) on the surface of target cells. This interaction promotes the survival and proliferation of the target cells playing significant roles in immune response and bone homeostasis by regulating osteoclast development.
Pathways	The interaction of M-CSF with its receptor is central to several biological pathways notably the immune system pathway and bone resorption pathway. Within these pathways the binding of M-CSF to CSF1R activates downstream signaling cascades such as the PI3K/AKT and MAPK pathways importantly affecting cell survival and

	differentiation. The M-CSF pathway intersects with other cytokines and factors like GM-CSF (granulocyte-macrophage colony-stimulating factor) which also regulate immune cell dynamics.
Associated diseases and disorders	Dysregulation of M-CSF levels is implicated in conditions such as osteoporosis and certain cancers. In osteoporosis M-CSF's role in osteoclast development links to increased bone resorption leading to bone loss. In cancers M-CSF overexpression may facilitate tumor-associated macrophage infiltration therefore supporting tumor progression. The interaction with CSF1R is significant as it serves as a potential target for therapeutic strategies aimed at modulating macrophage activity in these 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

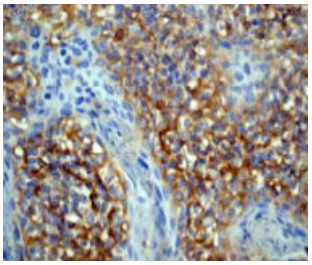
We do not recommend this combination. It is not covered by our product promise.

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.

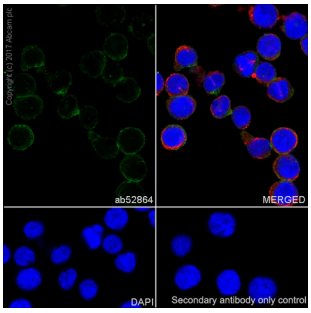
7 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-M-CSF antibody [EP1179Y] (ab52864)

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

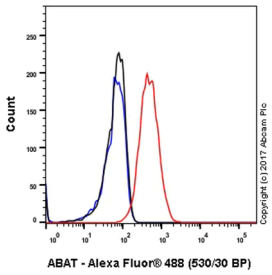
Formalin-fixed, paraffin-embedded human tonsil tissue stained for M-CSF with unpurified ab52864 (1/50 dilution) in immunohistochemical analysis.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-M-CSF antibody [EP1179Y] (ab52864)

M-CSF Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-M-CSF antibody

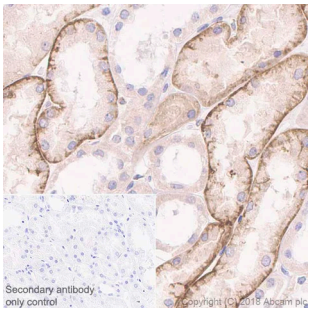
Immunocytochemistry/ Immunofluorescence analysis of THP-1 (Human monocytic leukemia monocyte) cells labeling M-CSF with Purified ab52864 at 1:100 (7.6 µg/ml). Cells were fixed in 100% Methanol and permeabilized with None. Cells were counterstained with ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1:200 (2.5 µg/ml). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody at 1:1000 (2 µg/ml) dilution. DAPI nuclear counterstain. PBS instead of the primary antibody was used as the secondary antibody only control.



Flow Cytometry (Intracellular) - Anti-M-CSF antibody [EP1179Y] (ab52864)

M-CSF Flow Cytometry (Intracellular) staining using rabbit Anti-M-CSF antibody

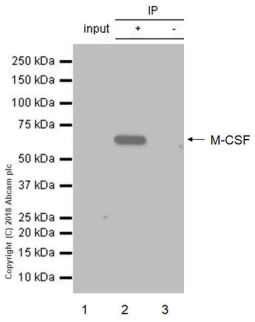
Intracellular Flow Cytometry analysis of THP-1 (Human monocytic leukemia monocyte) cells labeling M-CSF with purified ab52864 at 1/80 dilution (10µg/ml) (red). Cells were fixed with 4% Paraformaldehyde. A Goat anti rabbit IgG (Alexa Fluorr®488) secondary antibody was used at 1/2000 dilution. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-M-CSF antibody [EP1179Y] (ab52864)

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

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human kidney tissue sections labeling M-CSF with Purified ab52864 at 1:500 dilution (1.52 µg/ml). Heat mediated antigen retrieval was performed using ab93684 (Tris/EDTA buffer, pH 9.0)

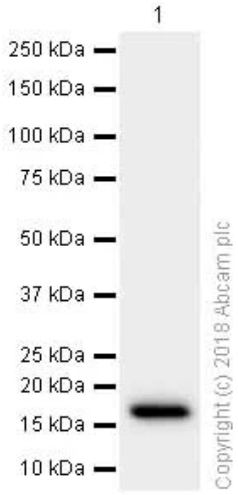


Immunoprecipitation - Anti-M-CSF antibody [EP1179Y] (ab52864)

ab52864 (purified) at 1:40 dilution (2µg) immunoprecipitating M-CSF in THP-1 whole cell lysate.
Lane 1 (input): THP-1 (Human monocytic leukemia monocyte) whole cell lysate 10µg
Lane 2 (+): ab52864 & THP-1 whole cell lysate
Lane 3 (-): Rabbit monoclonal IgG (ab172730) instead of ab52864 in THP-1 whole cell lysate
For western blotting, VeriBlot for IP Detection Reagent (HRP) (ab131366) was used for detection at 1:1000 dilution.
Blocking and diluting buffer: 5% NFDM/TBST.
All lanes:
Immunoprecipitation - Anti-M-CSF antibody [EP1179Y] (ab52864)

Predicted band size: 60 kDa

Observed band size: 60 kDa



Western blot - Anti-M-CSF antibody [EP1179Y] (ab52864)

Blocking buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-M-CSF antibody [EP1179Y] (ab52864) at 1/2000 dilution

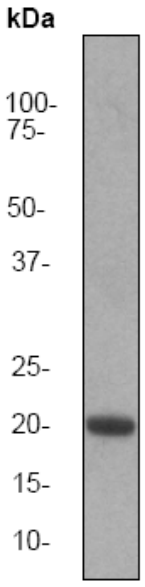
All lanes:
Human M-CSF (aa 33-190) recombinant protein at 0.015 µg

Secondary

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

Predicted band size: 60 kDa

Observed band size: 19 kDa



Western blot - Anti-M-CSF antibody [EP1179Y] (ab52864)

M-CSF Western blot staining of recombinant MCSF using rabbit Anti-M-CSF antibody

All lanes:
Western blot - Anti-M-CSF antibody [EP1179Y] (ab52864) at 1/50000 dilution

All lanes:
recombinant MCSF at 0.005 µg

Secondary

All lanes:
Goat anti-rabbit HRP at 1/2000 dilution

Predicted band size: 60 kDa

Observed band size: 20 kDa

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