abcam

ab300349

Anti-4-1BB/CD137 antibody [EPR25096-57]

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	EPR25096-57
Purification technique	Affinity purification Protein A
Concentration	0.514 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	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1/500
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/500
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Mouse
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Human
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

Not recommended

Species	Rat, Mouse
Dilution info	-
Notes	-

Target data

See full target information 4-1BB/CD137

Function	Receptor for TNFSF9/4-1BBL. Conveys a signal that enhances CD8(+) T-cell survival, cytotoxicity, and mitochondrial activity, thereby promoting immunity against viruses and tumors (Probable).

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	CD137 also known as 4-1BB or TNFRSF9 is a protein that functions as a costimulatory receptor in the immune system. It belongs to the tumor necrosis factor receptor (TNFR) superfamily. CD137 has a mass of approximately 30 kDa. Expression of CD137 occurs mainly on activated T lymphocytes including both CD8+ and CD4+ T cells as well as natural killer (NK) cells dendritic cells and monocytes. The CD137 ligand (CD137L) is the counterpart that engages this receptor transmitting signals important for immune response regulation.
Biological function summary	CD137 plays an important role in T cell activation and survival. It is a member of a receptor-ligand system that enhances immune cell functions. CD137 is part of a receptor complex that when bound by its ligand CD137L promotes cell proliferation and cytokine production. It also supports the development of memory T cells contributing to the body's ability to mount long-term immune responses.

Pathways	CD137 takes part in the NF-kB signaling and MAPK pathways. These pathways are vital for regulating immune responses and inflammation. CD137 signaling through these pathways involves interaction with proteins such as TRAF1 and TRAF2 which help mediate downstream effects critical for cell survival and proliferation. These interactions enhance the body's defense against pathogens and tumors.
Associated diseases and disorders	CD137 is associated with cancer immunotherapy and autoimmune diseases. In cancer CD137 enhances the anti-tumor activity of immune cells making it a target for immunotherapy strategies. For autoimmune diseases abnormal CD137 expression can lead to excessive immune responses contributing to disease pathogenesis. The protein is also connected to TNF-alpha through its involvement in inflammation suggesting potential intervention points for modulating immune response in related 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

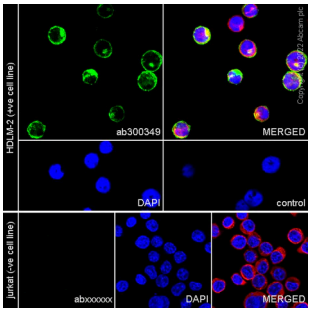
We do not recommend this combination. It is not covered by our product promise.

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.

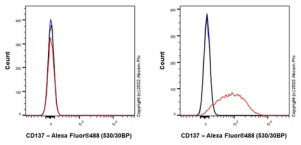
5 product images



Immunocytochemistry/ Immunofluorescence - Anti-4-1BB/CD137 antibody [EPR25096-57] (ab300349)

4-1BB/CD137 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-4-1BB/CD137 antibody

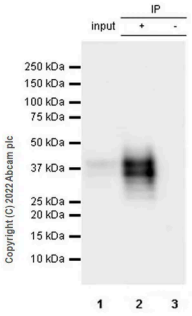
Immunofluorescent analysis of 80% Methanol-fixed, 0.1% TritonX-100 permeabilized HDLM-2 (human Hodgkin lymphoma) cells labelling CD137 with ab300349 at 1/500 (1.01 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 2 ug/ml dilution (Green). Confocal image showing cytoplasmic and membranous staining in HDLM-2 cell lineNegative control: Jurkat (PMID: 25409517) is observed. ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 2.5 ug/ml dilution (Red). The Nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 2 ug/ml dilution.



Flow Cytometry (Intracellular) - Anti-4-1BB/CD137 antibody [EPR25096-57] (ab300349)

4-1BB/CD137 Flow Cytometry (Intracellular) staining using rabbit Anti-4-1BB/CD137 antibody

Flow cytometric analysis of Jurkat (Human T cell leukemia T lymphocyte, Left) / HDLM-2 (Human Hodgkin lymphoma, Right) cells labelling CD137 with ab300349 at 1/500 dilution (0.1ug) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as the secondary antibody. Gated on viable cells.Negative control: Jurkat (PMID: 25409517).



Immunoprecipitation - Anti-4-1BB/CD137 antibody [EPR25096-57] (ab300349)

CD137 was immunoprecipitated from 0.35 mg HDLM-2 (human Hodgkin lymphoma) whole cell lysate 10 ug with ab300349 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab300349 at 1/1000 dilution. VeriBlot for IP secondary antibody (HRP) (ab131366) was used at 1/5000 dilution.
Lane 1: HDLM-2 (human Hodgkin lymphoma) whole cell lysate 10 ug

Lane 2: ab300349 IP in HDLM-2 whole cell lysate

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab300349 in HDLM-2 whole cell lysate

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

Exposure time: 15 seconds

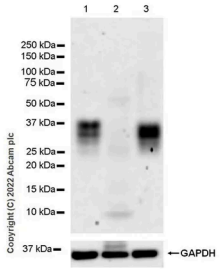
All lanes:
Immunoprecipitation - Anti-4-1BB/CD137 antibody [EPR25096-57] (ab300349) at 1/1000 dilution

All lanes:
HDLM-2 whole cell lysate at 10 µg

Secondary

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

Exposure time: 15s



Western blot - Anti-4-1BB/CD137 antibody [EPR25096-57] (ab300349)

4-1BB/CD137 Western blot staining using rabbit Anti-4-1BB/CD137 antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST
All lanes:
Western blot - Anti-4-1BB/CD137 antibody [EPR25096-57] (ab300349) at 1/1000 dilution

Lane 1:
Human tonsil tissue lysate

Lane 2:
Human spleen tissue lysate

Lane 3:
Human lymphoma tissue lysate

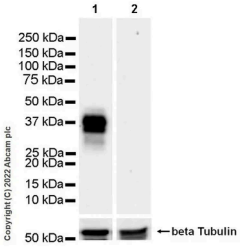
Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Performed under reducing conditions.

Observed band size: 32 kDa, 40 kDa

Exposure time: 3min



Western blot - Anti-4-1BB/CD137 antibody [EPR25096-57] (ab300349)

4-1BB/CD137 Western blot staining using rabbit Anti-4-1BB/CD137 antibody

Blocking and diluting buffer and concentration: 5% NFDM/TBST
All lanes:
Western blot - Anti-4-1BB/CD137 antibody [EPR25096-57] (ab300349) at 1/1000 dilution

Lane 1:
HDLM-2 (human Hodgkin lymphoma) whole cell lysate 20 µg

Lane 2:
Jurkat (human T cell leukemia T lymphocyte) whole cell lysate 20 µg

Secondary

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

Performed under reducing conditions.

Observed band size: 32 kDa, 40 kDa

Exposure time: 103s

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