abcam

ab248188

Anti-DEF6 antibody [EPR7492] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR7492
Purification technique	Affinity purification
Dissociation constant	2.01 x 10^{-10} M

Reactivity data

WB

Tested

Species	Human
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information DEF6

Function Phosphatidylinositol 3,4,5-trisphosphate-dependent guanine nucleotide exchange factor (GEF) which plays a role in the activation of Rho GTPases RAC1, RhoA and CDC42 (PubMed:12651066, PubMed:15023524). Can regulate cell morphology in cooperation with activated RAC1 (By similarity). Involved in immune homeostasis by ensuring proper trafficking and availability of T-cell regulator CTLA-4 at T-cell surface (PubMed:31308374). Plays a role in Th2 (T helper cells) development and/or activation, perhaps by interfering with ZAP70 signaling (By similarity).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab248188 is the carrier-free version of ab126792.

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.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

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

Activity summary	DEF6 also known as Differentially Expressed in FDCP 6 or SWAP-70 like adapter of T cells is a protein with a molecular mass of approximately 74 kDa. It functions as a guanine nucleotide exchange factor (GEF) and has a critical role in regulating cytoskeletal dynamics. DEF6 is predominantly expressed in hematopoietic cells specifically in T and B lymphocytes where it facilitates various cell signaling pathways. Its expression is firmly noted in immune-related tissues contributing to its significance in immune response modulation.
Biological function summary	DEF6 enhances actin cytoskeleton remodeling by activating Rho GTPases. It associates with other proteins to form complexes that modulate cell mobility and immune cell activation. Through its GEF activity DEF6 influences cell shape movement and signaling especially within immune cells. It plays a part in adaptive immune responses by assisting the rearrangement of actin filaments necessary for effective immune cell function.
Pathways	DEF6 integrates into signaling pathways like the T-cell receptor (TCR) signaling and B-cell receptor (BCR) signaling. Within these pathways DEF6 interacts with adaptor

	proteins such as LAT and SLP-76 important for downstream signaling events. Its role in these pathways ensures proper communication and immune system function as it helps transmit signals from the cell surface to the nucleus therefore influencing lymphocyte activation and differentiation.
Associated diseases and disorders	DEF6 has connections with autoimmune diseases such as systemic lupus erythematosus (SLE) and rheumatoid arthritis (RA). DEF6's involvement in these conditions links to its regulatory role in immune cell signaling which can affect autoantibody production and inflammation. Studies show that DEF6 might interact with proteins such as STAT4 and IRF5 which are also associated with autoimmune disease susceptibility providing insight into its therapeutic potential in these disorders.

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

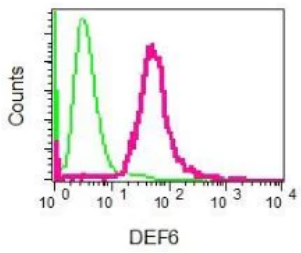
We do not recommend this combination. It is not covered by our product promise.

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.

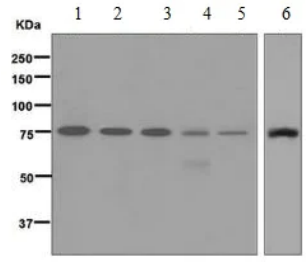
3 product images



Flow Cytometry (Intracellular) - Anti-DEF6 antibody [EPR7492] - BSA and Azide free (ab248188)

DEF6 Flow Cytometry (Intracellular) staining using rabbit Anti-DEF6 antibody

This data was developed using ab126792, the same antibody clone in a different buffer formulation.
ab126792 at 1/100 dilution staining DEF6 in permeabilized Jurkat cells by intracellular flow cytometry (red) compared with a rabbit IgG negative control (green).



Western blot - Anti-DEF6 antibody [EPR7492] - BSA and Azide free (ab248188)

This data was developed using ab126792, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-DEF6 antibody [EPR7492] (ab126792) at 1/1000 dilution

Lane 1:
Human tonsil lysate at 10 µg

Lane 2:
Ramos lysate at 10 µg

Lane 3:
MOLT4 lysate at 10 µg

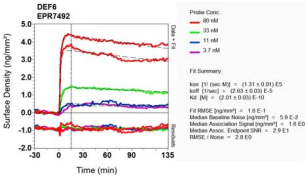
Lane 4:
Human thymus lysate at 10 µg

Lane 5:
Jurkat lysate at 10 µg

Secondary

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

Predicted band size: 74 kDa



OI-RD Scanning - Anti-DEF6 antibody [EPR7492] - BSA and Azide free (ab248188)

We have systematically measured KD (the equilibrium dissociation constant between the antibody and its antigen), of more than 840 recombinant antibodies to assess not only their individual KD values but also to see the average affinity of antibody. Based on the comparison with published literature values for mouse monoclonal antibodies, Recombinant antibodies appear to be on average 1-2 order of magnitude higher affinity.

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