abcam

ab239980

Anti-Transferrin antibody [EPR2932(2)] - 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	EPR2932(2)
Purification technique	Affinity purification Protein A
Concentration	1.035 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Not recommended

Species	Human
Dilution info	-

Notes	-

IP

Not recommended

Species	Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information TF

Function	Transferrins are iron binding transport proteins which can bind two Fe(3+) ions in association with the binding of an anion, usually bicarbonate. It is responsible for the transport of iron from sites of absorption and heme degradation to those of storage and utilization. Serum transferrin may also have a further role in stimulating cell proliferation. (Microbial infection) Serves as an iron source for Neisseria species, which capture the protein and extract its iron for their own use. (Microbial infection) Serves as an iron source for parasite T.brucei (strain 427), which capture TF via its own transferrin receptor ESAG6:ESAG7 and extract its iron for its own use.

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

ab239980 is the carrier-free version of ab109503.

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	Transferrin also known as serotransferrin or siderophilin is a glycoprotein with a mass of approximately 80 kDa. It is primarily synthesized in the liver and subsequently secreted into the bloodstream. Transferrin has an important role in iron transport and maintains iron homeostasis by binding and delivering iron to various tissues throughout the body. It can bind two ferric ions (Fe3+) in association with an anion usually bicarbonate. In biological fluids transferrin exists in serum plasma and other extracellular fluids.
Biological function summary	Transferrin facilitates the transportation of iron ions. It delivers iron to cells by binding to transferrin receptors on cell surfaces forming a complex that gets internalized via receptor-mediated endocytosis. Inside the endosomes acidic conditions cause iron to release from transferrin enabling its utilization in cellular processes like DNA synthesis and electron transport. Transferrin itself acts independently and does not form part of a larger protein complex. Variants of transferrin include mouse transferrin bovine transferrin and biotinylated transferrin each with similar function across different species.
Pathways	Transferrin operates centrally in iron metabolism and homeostasis pathways. It functions in coordination with the transferrin receptor 1 (TfR1) which facilitates cellular uptake of the transferrin-iron complex. Additionally transferrin plays a role in the hepcidin regulatory pathway. Hepcidin modulates iron homeostasis by decreasing iron absorption in the intestine and controlling iron release from macrophages and hepatocytes. Transferrin's ability to bind iron connects it to other iron-containing proteins such as ferritin which stores excess iron in cells.
Associated diseases and disorders	Several iron-related conditions can impact transferrin function including anemia and hemochromatosis. Anemia often occurs when there is insufficient iron delivery leading to inadequate hemoglobin synthesis and reduced oxygen transport. Aberrant transferrin receptor activity affects iron uptake in such conditions. Hemochromatosis characterized by iron overload can occur due to mutations in genes like HFE leading to changes in hepcidin regulation and increased intestinal iron absorption. Transferrin levels and saturation are clinical indicators used to assess iron status in such 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

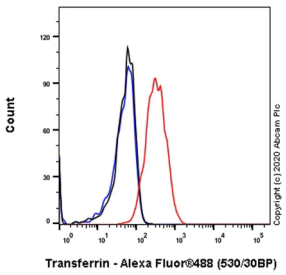
We do not recommend this combination. It is not covered by our product promise.

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.

1 product image



Flow Cytometry (Intracellular) - Anti-Transferrin antibody [EPR2932(2)] - BSA and Azide free (ab239980)

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

This data was developed using ab109503, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized HepG2 (Human hepatocellular carcinoma epithelial cell) cells labelling Transferrin with ab109503 at 1/50 dilution (1µg) (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). A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.

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