abcam

ab240016

Anti-USF1 antibody [EPR6430] - 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	EPR6430
Purification technique	Affinity purification Protein A
Dissociation constant	9.5 x 10^{-11} M
Concentration	1.05 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Not recommended

Species	Human, Mouse, Rat
Dilution info	-

Notes	-

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

WB

Expected

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

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-

Notes	ab199376 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse, Rat
Dilution info	-
Notes	-

Target data

See full target information USF1

Function	Transcription factor that binds to a symmetrical DNA sequence (E-boxes) (5'-CACGTG-3') that is found in a variety of viral and cellular promoters.

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

ab240016 is the carrier-free version of ab125020.

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	USF1 also known as Upstream Stimulatory Factor 1 is a transcription factor with a molecular weight of about 43 kDa. It binds to specific DNA sequences to regulate transcription of target genes. This protein expresses in many tissues and is particularly abundant in the liver adipose tissue and muscle. It belongs to the bHLH (basic helix-loop-helix) family of transcription factors and it dimerizes to function effectively.
Biological function summary	USF1 plays a role in controlling lipid and glucose metabolism. As part of a transcriptional complex it regulates the expression of genes involved in metabolic processes. USF1 influences the transcription of genes tied to cholesterol biosynthesis such as HMGCR (3-hydroxy-3-methylglutaryl-CoA reductase) and genes connected to fatty acid metabolism. Its activity helps manage the body's metabolic balance by controlling enzyme levels in these pathways.
Pathways	USF1 integrates within the lipid metabolism pathway and the insulin signaling pathway. In lipid metabolism it regulates enzymes that are critical for lipid homeostasis such as those involved in cholesterol synthesis. In the insulin signaling pathway USF1 interacts with proteins like SREBP-1c (Sterol Regulatory Element-Binding Protein 1c) affecting the expression of glucoregulatory genes. These interactions coordinate responses to metabolic demands and help maintain energy balance within cells.
Associated diseases and disorders	Several studies associate USF1 with dyslipidemia and metabolic syndrome. Variants of USF1 link to alterations in lipid profiles potentially increasing the risk for cardiovascular diseases. The protein interacts with other key regulators such as LXR (Liver X Receptor) influencing cholesterol metabolism and contributing to atherosclerosis development. Understanding USF1's role in these conditions can help develop targeted therapies for metabolic 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.

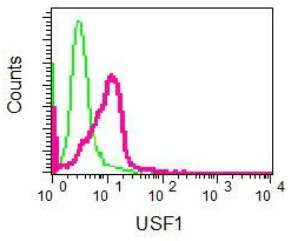
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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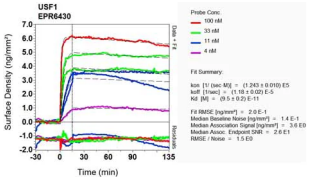
2 product images



Flow Cytometry (Intracellular) - Anti-USF1 antibody [EPR6430] - BSA and Azide free (ab240016)

USF1 Flow Cytometry (Intracellular) staining using rabbit Anti-USF1 antibody

Intracellular flow cytometric analysis of permeabilized Jurkat cells using ab125020 at 1/10 dilution (red) or a rabbit IgG (negative) (green). This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab125020).



OI-RD Scanning - Anti-USF1 antibody [EPR6430] - BSA and Azide free (ab240016)

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'.