abcam

ab154854

Anti-TCEB2/Elongin-B antibody [EPR10441(B)]

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	EPR10441(B)
Purification technique	Affinity purification Protein A
Concentration	0.117 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

IHC-P

Not recommended

Species	Human
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/10 - 1/100
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Target data

See full target information ELOB

Function

SIII, also known as elongin, is a general transcription elongation factor that increases the RNA polymerase II transcription elongation past template-encoded arresting sites. Subunit A is transcriptionally active and its transcription activity is strongly enhanced by binding to the dimeric complex of the SIII regulatory subunits B and C (elongin BC complex) (PubMed:7638163). In embryonic stem cells, the elongin BC complex is recruited by EPOP to Polycomb group (PcG) target genes in order generate genomic region that display both active and repressive chromatin properties, an important feature of pluripotent stem cells (By similarity). Core component of multiple cullin-2 and cullin-5-RING E3 ubiquitin-protein ligase complexes (ECS complexes), which mediate the ubiquitination of target proteins (PubMed:10205047, PubMed:12004076, PubMed:12050673, PubMed:15590694, PubMed:26138980, PubMed:29775578, PubMed:29779948, PubMed:33268465, PubMed:37844242, PubMed:38326650, PubMed:39039081, PubMed:35512830, PubMed:39039081, PubMed:40440427). By binding to BC-box motifs it seems to link target recruitment subunits, like VHL and members of the SOCS box family, to

Cullin/RBX1 modules that activate E2 ubiquitination enzymes (PubMed:10205047, PubMed:12004076, PubMed:12050673, PubMed:15590694). Component the von Hippel-Lindau ubiquitination complex CBC(VHL) (PubMed:10205047, PubMed:12004076, PubMed:12050673, PubMed:15590694). A number of ECS complexes (containing either KLHDC2, KLHDC3, KLHDC10, APPBP2, FEM1A, FEM1B or FEM1C as substrate-recognition component) are part of the DesCEND (destruction via C-end degrons) pathway, which recognizes a C-degron located at the extreme C terminus of target proteins, leading to their ubiquitination and degradation (PubMed:26138980, PubMed:29775578, PubMed:29779948, PubMed:36805027, PubMed:37844242, PubMed:38177675). The ECS(ASB9) complex mediates ubiquitination and degradation of CKB (PubMed:33268465). As part of a multisubunit ubiquitin ligase complex, polyubiquitinates monoubiquitinated POLR2A (PubMed:19920177). ECS(LRR1) ubiquitinates MCM7 and promotes CMG replisome disassembly by VCP and chromatin extraction during S-phase (By similarity). As part of the ECS(RAB40C) complex, mediates ANKRD28 ubiquitination and degradation, thereby inhibiting protein phosphatase 6 (PP6) complex activity and focal adhesion assembly during cell migration (PubMed:35512830). The ECS(ASB7) complex acts a negative regulator of H3K9me3 histone mark by mediating ubiquitination and degradation of SUV39H1 (PubMed:40440427). (Microbial infection) Following infection by HIV-1 virus, component of a cullin-5-RING E3 ubiquitin-protein ligase complex (ECS complex) hijacked by the HIV-1 Vif protein, which catalyzes ubiquitination and degradation of APOBEC3F and APOBEC3G (PubMed:18562529, PubMed:20532212, PubMed:22190037, PubMed:24225024, PubMed:24402281, PubMed:36754086). The complex can also ubiquitinate APOBEC3H to some extent (PubMed:37640699).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C

Notes

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.

Supplementary info

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

Activity summary	TCEB2 also known as Elongin-B is a protein that is part of the Elongin complex. It has an approximate molecular mass of 14 kDa. Elongin-B is widely expressed in various tissues including the heart liver and kidney. This protein works mechanically by increasing the transcription elongation efficiency of RNA polymerase II which is key for proper gene expression. Elongin-B functions within a cellular environment where it modulates transcriptional processes.
Biological function summary	Elongin-B participates as a component of the Elongin complex which also includes Elongin-C and Elongin-A. This complex enhances the rate of transcriptional elongation by alleviating the effects of transcriptional pausing or stalling. By facilitating the transcription of DNA to mRNA Elongin-B indirectly influences various cellular functions and growth processes. It acts by stabilizing other subunits of the complex contributing to the overall efficiency of gene expression systems.
Pathways	Elongin-B takes part in the ubiquitin-proteasome pathway a critical cellular system for protein degradation and turnover. It partners with others like Von Hippel-Lindau (VHL) protein within this pathway. Apart from protein degradation Elongin-B is also involved in the regulation of hypoxia-inducible factor (HIF) connecting it to pathways related to cellular response to oxygen levels. This interaction illustrates the protein's role in managing levels of various proteins related to stress responses in cells.
Associated diseases and disorders	Elongin-B has implications in cancer and von Hippel-Lindau disease. Abnormal functioning or expression influences cellular mechanisms like uncontrolled cell growth seen in cancer proliferation. Elongin-B's interaction with VHL protein affects von Hippel-Lindau syndrome a condition that leads to tumor and cyst development in different parts of the body. The study of Elongin-B's role in these pathologies helps in understanding disease progression and identifying potential therapeutic targets.

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.

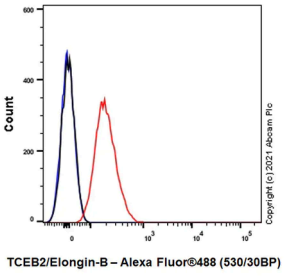
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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:
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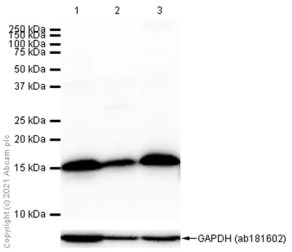
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2 product images



Flow Cytometry (Intracellular) - Anti-TCEB2/Elongin-B antibody [EPR10441(B)] (ab154854)

Flow cytometry analysis of Jurkat (Human T cell leukemia T lymphocyte) labeling TCEB2/Elongin-B with purified ab154854 at 1/20 dilution (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. Goat anti rabbit IgG (Alexa Fluor® 488, ab150081) was used as a secondary antibody at 1/2000 dilution. Isotype control -Rabbit monoclonal IgG (Black). Unlableled control -Cell without incubation with primary antibody and secondary antibody (Blue).



Western blot - Anti-TCEB2/Elongin-B antibody [EPR10441(B)] (ab154854)

Blocking and diluting buffer and concnetration: 5% NFDM/TBST. ab181602, anti GAPDH antibody was used as loading control.
All lanes:
Western blot - Anti-TCEB2/Elongin-B antibody [EPR10441(B)] (ab154854) at 1/1000 dilution

Lane 1:
Jurkat (Human T cell leukemia T lymphocyte) whole cell lysate at 20 µg

Lane 2:
A431 (Human epidermoid carcinoma epithelial cell) whole cell lysate at 20 µg

Lane 3:
K-562 (Human chronic myelogenous leukemia lymphoblast) whole cell lysate at 20 µg

Secondary

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

Predicted band size: 13 kDa

Observed band size: 15 kDa

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