abcam

ab256300

Anti-SLFN12 antibody [EPR20904-32] - BSA and Azide free

Recombinant | RabMAb | KO Validated

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	EPR20904-32
Purification technique	Affinity purification Protein A
Concentration	1.038 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Human
Dilution info	-

Notes	-

WB

Expected

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

IHC-P

Not recommended

Species	Human
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Human
Dilution info	-
Notes	-

IHC-Fr

Tested

Species	Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information SLFN12

Function	Ribonuclease which is part of an E2/17beta-estradiol-induced pro-apoptotic signaling pathway. E2 stabilizes the PDE3A/SLFN12 complex in the cytosol, promoting the dephosphorylation of SLFN12 and activating its pro-apoptotic ribosomal RNA/rRNA ribonuclease activity. This apoptotic pathway might be relevant in tissues with high concentration of E2 and be for instance involved in placenta remodeling (PubMed:31420216, PubMed:34272366, PubMed:34707099, PubMed:35104454). May play a role in cell differentiation (PubMed:30045019).

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

ab256300 is the carrier-free version of ab234418.

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	SLFN12 also known as Schlafen family member 12 is a protein that plays a role in protein synthesis regulation and innate immunity. It carries a mass of approximately 65 kDa. The protein shows expression in multiple human tissues including the colon small intestine and prostate. SLFN12 contains a notable AAA+ ATPase domain which suggests involvement in processes requiring energy such as molecular chaperone activity. Researchers have studied its expression pattern noting its presence at the cellular level which hints at diverse functional implications across various cells.
Biological function summary	SLFN12 modulates the differentiation of cells and appears to play a role in immune response. It does not form part of a large protein complex. It functions independently to exert effects specifically influencing maturation of specific immune cells and contributing to maintaining cellular homeostasis. Its role in differentiation makes it significant in balancing immune responses ensuring cells reach necessary maturity to perform their function in defense mechanisms.
Pathways	Studies highlight that SLFN12 contributes to the regulation of protein synthesis and the immune response pathway. In the synthesis pathway it potentially interacts with ribosomal proteins to regulate production of proteins modulating cell homoeostasis and growth. Meanwhile its involvement in the immune response pathway shows interaction with other SLFN family proteins altering cellular responses to microbial infections. Research also suggests it operates alongside proteins like SLFN11 to ensure effective cellular defense against pathogenic attacks.
Associated diseases and disorders	Researchers have associated SLFN12 with inflammatory bowel disease and certain types of cancer such as prostate cancer. Its expression patterns in inflamed tissue suggest that SLFN12 may mediate inflammatory responses exacerbating or alleviating the condition. In prostate cancer SLFN12 seems to interact with the androgen receptor pathway potentially influencing cancer cell proliferation. Understanding these interactions and their pathological consequences will provide insights into its role in disease mechanisms and offer perspectives for therapeutics targeting SLFN12-mediated pathways.

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.

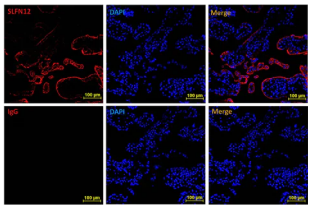
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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

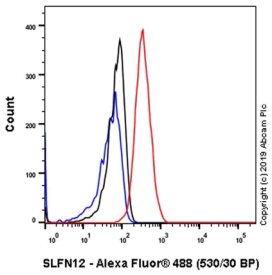


Immunohistochemistry (Frozen sections) - Anti-SLFN12 antibody [EPR20904-32] - BSA and Azide free (ab256300)

SLFN12 Immunohistochemistry (Frozen sections) staining using rabbit Anti-SLFN12 antibody

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen human placenta tissue labeling SLFN12 with ab234418 at 1/100 dilution (green), followed by Donkey anti-Rabbit IgG (H+L) secondary antibody, Alexa Fluor® 555 secondary at a 1/100 dilution. Positive staining in syncytiotrophoblast of human placenta is observed. Counterstained with DAPI (blue). Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Donkey anti-Rabbit IgG (H+L) secondary antibody, Alexa Fluor® 555 used at a 1/100 dilution. Heat mediated antigen retrieval using sodium citrate buffer (10 mM citrate pH 6.0 and 0.05% Tween-20). The image is kindly provided by Dr Xiaodong Wang.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab234418).



Flow Cytometry (Intracellular) - Anti-SLFN12 antibody [EPR20904-32] - BSA and Azide free (ab256300)

SLFN12 Flow Cytometry (Intracellular) staining using rabbit Anti-SLFN12 antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol permeabilized HeLa (human cervix adenocarcinoma epithelial cell) cell line labeling SLFN12 with ab234418 at 1/60 (red) compared with a Rabbit monoclonal IgG (ab172730) (black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077), at 1/2000 dilution was used as the secondary antibody.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab234418).

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