abcam

ab109197

Anti-SAM68 antibody [EPR3232]

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	EPR3232
Purification technique	Affinity purification Protein A
Concentration	0.382 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/250 - 1/500
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

WB

Tested

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

Predicted

Species	Mouse
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/250 - 1/500
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/100 - 1/1000
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Predicted

Species	Mouse
Dilution info	-
Notes	-

Target data

See full target information KHDRBS1

Function

Recruited and tyrosine phosphorylated by several receptor systems, for example the T-cell, leptin and insulin receptors. Once phosphorylated, functions as an adapter protein in signal transduction cascades by binding to SH2 and SH3 domain-containing proteins. Role in G2-M progression in the cell cycle. Represses CBP-dependent transcriptional activation apparently by competing with other nuclear factors for binding to CBP. Also acts as a putative regulator of mRNA stability and/or translation rates and mediates mRNA nuclear export. Positively regulates the association of constitutive transport element (CTE)-containing mRNA with large polyribosomes and translation initiation. According to some authors, is not involved in the nucleocytoplasmic export of unspliced (CTE)-containing RNA species according to (PubMed:22253824). RNA-binding protein that plays a role in the regulation of alternative splicing and influences mRNA splice site selection and exon inclusion. Binds to RNA containing 5'-[AU]UAA-3' as a bipartite motif spaced by more than 15 nucleotides. Binds poly(A). Can regulate CD44 alternative splicing in a Ras pathway-dependent manner (PubMed:26080397). In cooperation with HNRNPA1 modulates alternative splicing of BCL2L1 by promoting splicing toward isoform Bcl-X(S), and of SMN1 (PubMed:17371836, PubMed:20186123). Can regulate alternative splicing of NRXN1 and NRXN3 in the laminin G-like domain 6 containing the evolutionary conserved neurexin alternative spliced segment 4 (AS4) involved in neurexin selective targeting to postsynaptic partners. In a neuronal activity-dependent manner cooperates synergistically with KHDRBS2/SLIM-1 in regulation of NRXN1 exon skipping at AS4. The cooperation with KHDRBS2/SLIM-1 is antagonistic for regulation of NXRN3 alternative splicing at AS4 (By similarity). Isoform 3, which is expressed in growth-arrested cells only, inhibits S phase.

Storage

Shipped at conditions	Conditional Ambient

Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Storage information	Stable for 12 months at -20°C

Notes

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.

Species reactivity
Rat: We have preliminary internal testing data to indicate this antibody may not react with this species.
Please contact us for more information.

Supplementary info

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

Activity summary	The protein SAM68 also known as Src-associated in mitosis 68 kDa is a member of the STAR (Signal Transduction and Activation of RNA) family and has a mass of approximately 68 kilodaltons. SAM68 is expressed in a broad range of tissues but shows higher expression in the brain and testis. It functions mechanically as a nuclear RNA-binding protein involved in RNA metabolism alternative splicing and is linked to signal transduction pathways. The ability of SAM68 to bind RNA is important for its role in RNA processing.
Biological function summary	SAM68 impacts multiple cellular processes by regulating alternative splicing of pre-mRNA and is known to be part of a larger ribonucleoprotein complex. This functionality enables SAM68 to influence gene expression and impact cell proliferation and differentiation. By interacting with several signaling molecules it modulates processes that are vital for the proper functioning of various cell types including neurons and germ cells.
Pathways	SAM68 interacts with several signaling pathways notably the PI3K/AKT and MAPK/ERK pathways where it influences cellular survival and growth. Within these pathways SAM68 interacts with proteins such as the tyrosine kinase Src which

	facilitates signal transduction events leading to changes in cell behavior. The protein also associates with hnRNPA1 affecting mRNA processing and influencing downstream signaling cascades.
Associated diseases and disorders	SAM68 has connections to cancer and neurodegenerative diseases. Abnormal expression or mutations in SAM68 are linked to oncogenesis particularly in prostate and breast cancers where it interacts with signaling proteins like ERK. In neurodegenerative disorders SAM68 is implicated in altering neuronal RNA processing potentially contributing to diseases such as Alzheimer's with connections to proteins like tau. Understanding SAM68's role in these diseases highlights its potential as a therapeutic target.

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

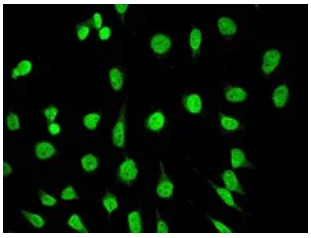
We do not recommend this combination. It is not covered by our product promise.

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.

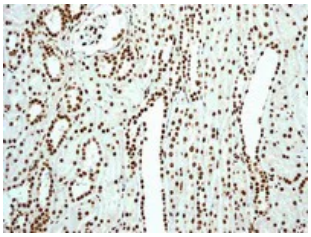
4 product images



Immunocytochemistry/ Immunofluorescence - Anti-SAM68 antibody [EPR3232] (ab109197)

SAM68 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-SAM68 antibody

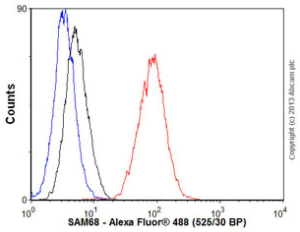
ab109197, at 1/250, staining SAM68 in HeLa cells by Immunofluorescence.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SAM68 antibody [EPR3232] (ab109197)

SAM68 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-SAM68 antibody

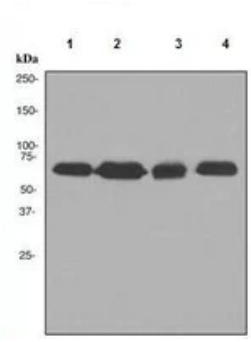
ab109197 at 1/250 staining SAM68 in paraffin-embedded Human kidney tissue by Immunohistochemistry.
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-SAM68 antibody [EPR3232] (ab109197)

SAM68 Flow Cytometry (Intracellular) staining using rabbit Anti-SAM68 antibody

Overlay histogram showing HeLa cells stained with ab109197 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab109197 1/1000 dilution) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) (ab150077) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (1µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.



Western blot - Anti-SAM68 antibody [EPR3232] (ab109197)

All lanes:
Western blot - Anti-SAM68 antibody [EPR3232] (ab109197) at 1/1000 dilution

Lane 1:
Jurkat cell lysate at 10 µg

Lane 2:
HeLa cell lysate at 10 µg

Lane 3:
A431 cell lysate at 10 µg

Lane 4:
A673 cell lysate at 10 µg

Predicted band size: 48 kDa

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