abcam

ab247320

Anti-SCF antibody [EP665Y] - 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	EP665Y
Purification technique	Affinity purification Protein A
Concentration	0.988 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Recombinant fragment
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Recombinant fragment
Dilution info	-
Notes	-

WB

Tested

Species	Recombinant fragment
Dilution info	1/10000
Notes	-

Expected

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

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Recombinant fragment
Dilution info	-
Notes	-

Target data

See full target information KITLG

Function	Ligand for the receptor-type protein-tyrosine kinase KIT. Plays an essential role in the regulation of cell survival and proliferation, hematopoiesis, stem cell maintenance, gametogenesis, mast cell development, migration and function, and in melanogenesis. KITLG/SCF binding can activate several signaling pathways. Promotes phosphorylation of PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase, and subsequent activation of the kinase AKT1. KITLG/SCF and KIT also transmit signals via GRB2 and activation of RAS, RAF1 and the MAP kinases MAPK1/ERK2 and/or MAPK3/ERK1. KITLG/SCF and KIT promote activation of STAT family members STAT1, STAT3 and STAT5. KITLG/SCF and KIT promote activation of PLCG1, leading to the production of the cellular signaling molecules diacylglycerol and inositol 1,4,5-trisphosphate. KITLG/SCF acts synergistically with other cytokines, probably interleukins.

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

ab247320 is the carrier-free version of ab52603.

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	Stem Cell Factor (SCF) also known as kit ligand c-kit ligand or KITLG is a critical protein involved in cell signaling. It usually appears as a 30 kDa glycoprotein. SCF is widely expressed in various tissues including the bone marrow brain and fetal liver. Its major mechanical function is to bind to the c-KIT receptor triggering various intracellular pathways that influence cell proliferation survival and differentiation. Aside from its other names SCF in mouse plasma is often monitored including in assays like c-kit ligand ELISA.
Biological function summary	SCF acts as an indispensable growth factor promoting hematopoiesis and melanogenesis. It plays a significant role in the regulation of hematopoietic stem cells and mast cells. SCF and its receptor c-KIT form a complex that activates signaling pathways essential for these processes. This protein is also involved in gametogenesis by aiding the proliferation and survival of primordial germ cells. SCF's action is not limited to mammals as studies demonstrate its activity in other species like mouse SCF.
Pathways	SCF impacts multiple important biological systems by engaging with c-KIT. The SCF/c-KIT interaction contributes to the MAPK/ERK pathway influencing cell division and growth. It also plays a role in the PI3K/AKT pathway that governs cell survival. Beyond its direct association with c-KIT SCF's involvement in these pathways connects it to several other proteins like RAS and PI3K which are important for signal transduction.

Associated diseases and disorders	SCF has associations with several pathological conditions. Dysregulation of the SCF/c-KIT pathway can lead to disorders like mastocytosis and certain leukemias. The overactivation or mutations in c-KIT are often implicated in these diseases due to its cooperative action with SCF. Additionally aberrant SCF signaling can contribute to the progression of gastrointestinal stromal tumors (GIST) where c-KIT has known relevance. Understanding SCF's role can therefore provide insights into diagnostic and therapeutic strategies for these conditions.

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

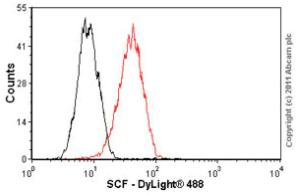
We do not recommend this combination. It is not covered by our product promise.

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



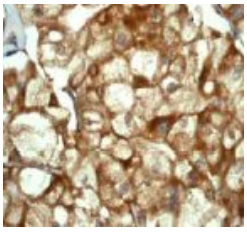
Flow Cytometry (Intracellular) - Anti-SCF antibody [EP665Y] - BSA and Azide free (ab247320)

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

This data was developed using ab52603, the same antibody clone in a different buffer formulation.Overlay histogram showing MCF-7 cells stained with ab52603 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab52603, 1/20 dilution) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-rabbit IgG (H+L) (ab96899) at 1/500 dilution for 30 min at 22°C. Isotype control

antibody (black line) was rabbit monoclonal IgG (1µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in MCF-7 cells fixed with methanol (5 min) used under the same conditions.

Please note that Abcam do not have data for use of this antibody on non-fixed cells. We welcome any customer feedback.

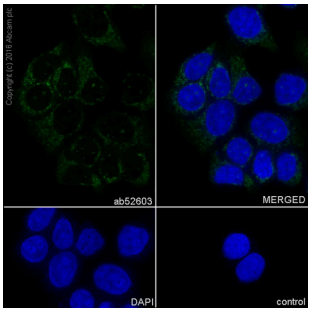


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SCF antibody [EP665Y] - BSA and Azide free (ab247320)

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

This data was developed using ab52603, the same antibody clone in a different buffer formulation. Immunohistochemical analysis of paraffin-embedded human kidney carcinoma tissue using ab52603 at a dilution of 1/100-1/250.

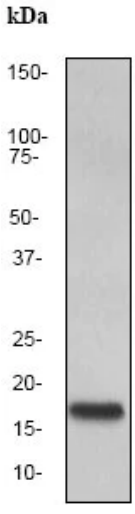
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-SCF antibody [EP665Y] - BSA and Azide free (ab247320)

SCF Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-SCF antibody

This data was developed using ab52603, the same antibody clone in a different buffer formulation. Immunocytochemistry/Immunofluorescence analysis of MCF-7 (human breast carcinoma) labelling SCF with purified ab52603 at 1/500. Cells were fixed with 100% methanol. An Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/1000) was used as the secondary antibody (ab150077). Nuclei counterstained with DAPI (blue).



Western blot - Anti-SCF antibody [EP665Y] - BSA and Azide free (ab247320)

This data was developed using ab52603, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-SCF antibody [EP665Y] (ab52603) at 1/10000 dilution

All lanes:
recombinant protein (5ng)

Secondary

All lanes:
HRP-labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 30 kDa

Observed band size: 18 kDa

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