abcam

ab240126

Anti-SFRP4 antibody [EPR9389] - 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	EPR9389
Purification technique	Affinity purification Protein A
Concentration	1.05 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human, Mouse
Dilution info	-
Notes	-

Predicted

Species	Rat
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Rat
Dilution info	-
Notes	-

IP

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

WB

Not recommended

Species	Human, Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Rat
Dilution info	-
Notes	-

Target data

See full target information SFRP4

Function Soluble frizzled-related proteins (sFRPS) function as modulators of Wnt signaling through direct interaction with Wnts. They have a role in regulating cell growth and differentiation in specific cell types (By similarity). SFRP4 plays a role in bone morphogenesis. May also act as a regulator of adult uterine morphology and function. May also increase apoptosis during ovulation possibly through modulation of FZ1/FZ4/WNT4 signaling (By similarity). Has phosphaturic effects by specifically inhibiting sodium-dependent phosphate uptake (PubMed:12952927).

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

ab240126 is the carrier-free version of ab154167.

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	SFRP4 also known as Secreted Frizzled Related Protein 4 is a 40 kDa protein involved in modulating Wnt signaling pathways. It is a member of the secreted frizzled-related proteins (sFRPs) that act as Wnt antagonists. SFRP4 has a cysteine-rich domain homologous to the Wnt-binding site on frizzled proteins. Expressed in many tissues including the heart lung and kidney SFRP4 plays a role in various physiological processes by influencing cell signaling.

Biological function summary	SFRP4 regulates cell growth and differentiation. It interacts with Wnt ligands preventing them from binding to their receptors. SFRP4 does not typically function as part of a protein complex acting instead as an antagonist on its own. By inhibiting Wnt activity SFRP4 influences embryonic development tissue homeostasis and even cancer progression. The impact of SFRP4 varies depending on the tissue-specific context reflecting its complex biological roles.
Pathways	SFRP4 is significant in the Wnt signaling pathway and the β-catenin independent pathway. By interacting with Wnt ligands SFRP4 can prevent the activation of canonical Wnt/β-catenin signaling a pathway involved in cell fate determination and stem cell renewal. It also influences the non-canonical pathways where the Wnt signaling does not involve β-catenin impacting processes like cell movement and polarity. In these pathways SFRP4 interacts with proteins such as Disheveled and Axin modulating their activities.
Associated diseases and disorders	The disruption of SFRP4 expression links to osteoarthritis and breast cancer. Abnormal SFRP4 levels can result in improper Wnt signaling contributing to these conditions. In osteoarthritis SFRP4 imbalance affects cartilage integrity while in breast cancer altered SFRP4 expression may influence tumor growth and progression. Related proteins such as β-catenin in cancer or MMPs in osteoarthritis highlight the importance of SFRP4 in disease susceptibility and progression.

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

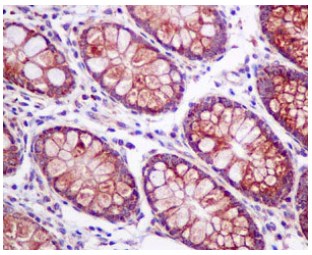
We do not recommend this combination. It is not covered by our product promise.

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.

5 product images

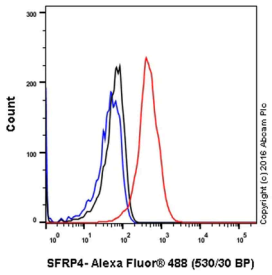


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SFRP4 antibody [EPR9389] - BSA and Azide free (ab240126)

SFRP4 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-SFRP4 antibody

Immunohistochemical analysis of paraffin-embedded Human colon tissue labeling SFRP4 with ab154167 at 1/50 dilution.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab154167).

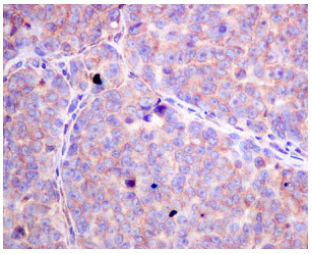
Heat mediated antigen retrieval was performed before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-SFRP4 antibody [EPR9389] - BSA and Azide free (ab240126)

SFRP4 Flow Cytometry (Intracellular) staining using rabbit Anti-SFRP4 antibody

Intracellular Flow Cytometry analysis of MCF-7 (human breast carcinoma) cells labeling SFRP4 with unpurified ab154167 at 1/130 dilution (10ug/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluor® 488) (1/2000 dilution) was used as the secondary antibody. Rabbit monoclonal IgG (Black) was used as the isotype control, cells without incubation with primary antibody and secondary antibody (Blue) were used as the unlabeled control.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab154167).

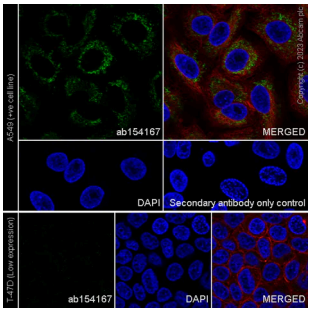


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SFRP4 antibody [EPR9389] - BSA and Azide free (ab240126)

SFRP4 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-SFRP4 antibody

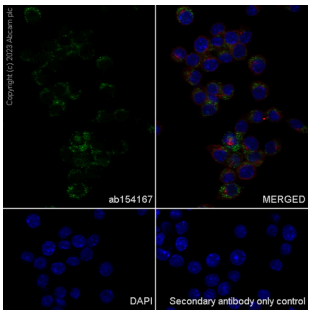
Immunohistochemical analysis of paraffin-embedded Human ovarian carcinoma tissue labeling SFRP4 with ab154167 at 1/50 dilution.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab154167).

Heat mediated antigen retrieval was performed before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-SFRP4 antibody [EPR9389] - BSA and Azide free (ab240126)

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab154167). Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized A549 (human lung carcinoma epithelial cell) cells labelling SFRP4 with ab154167 at 1/500 (2.722 µg/ml) dilution followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed seondary antibody used at 1/1000 diluting (2 µg/ml)(Green). ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 (2.5 µg/ml) dilution (Red). The Nuclear counterstain was (Blue). Confocal image showing positive staining in A549 cell line. Negative control: T-47D. Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).



Immunocytochemistry/ Immunofluorescence - Anti-SFRP4 antibody [EPR9389] - BSA and Azide free (ab240126)

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab154167). Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized RAW 264.7 (mouse Abelson murine leukemia virus-induced tumor macrophage) cells labelling SFRP4 with ab154167 at 1/200 (6.805 µg/ml) dilution followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed seondary antibody used at 1/1000 diluting (2 µg/ml)(Green). ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 (2.5 µg/ml) dilution (Red). The Nuclear counterstain was (Blue). Confocal image showing positive staining in RAW 264.7 cell line. Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

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