abcam

# ab154167

# Anti-SFRP4 antibody [EPR9389]

Recombinant | RabMAb | 20ul selling size

## 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** | EPR9389 |
| **Purification technique** | Affinity purification Protein A |
| **Concentration** | 1.34 mg/mL The concentration of this product may be batch-dependent<br>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** | 1/50 - 1/100 |
| **Notes** | Perform heat-mediated antigen retrieval before commencing with IHC staining protocol. |

### 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** | Conditional Ambient |
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | -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.

## 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**

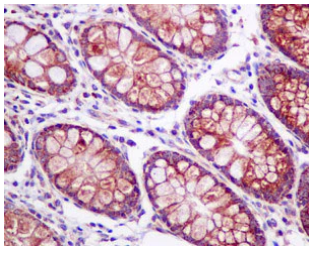
We do not recommend this combination. It is not covered by our product promise.

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.

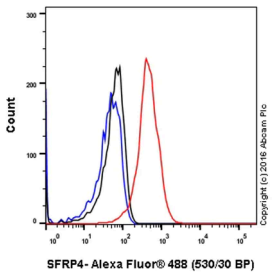
## 5 product images



### Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SFRP4 antibody [EPR9389] (ab154167)

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

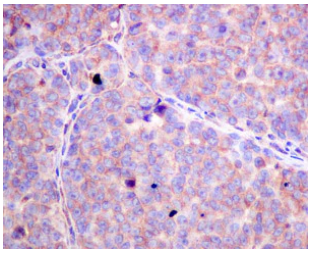
Immunohistochemical analysis of paraffin-embedded Human colon tissue labeling SFRP4 with ab154167 at 1/50 dilution.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.




## Flow Cytometry (Intracellular) - Anti-SFRP4 antibody [EPR9389] (ab154167)

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

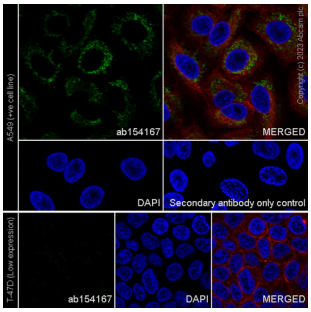
Intracellular Flow Cytometry analysis of MCF-7 (human breast carcinoma) cells labeling SFRP4 with unpurified ab154167 at 1/130 dilution (10ug/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluor® 488) (1/2000 dilution) was used 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.



## Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SFRP4 antibody [EPR9389] (ab154167)

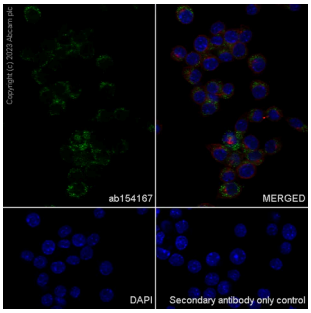
SFRP4 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-SFRP4 antibody

Immunohistochemical analysis of paraffin-embedded Human ovarian carcinoma tissue labeling SFRP4 with ab154167 at 1/50 dilution.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.




## Immunocytochemistry/ Immunofluorescence - Anti-SFRP4 antibody [EPR9389] (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] (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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