abcam

ab277537

# Anti-SEPP1 antibody [EPR24174-24] - BSA and Azide free

Recombinant | RabMAb

## Key facts

| | |
|---|---|
| **Isotype** | IgG |
| **Host species** | Rabbit |
| **Storage buffer** | Constituents: PBS |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | The exact immunogen used to generate this antibody is proprietary information. |
| **Carrier free** | Yes |
| **Clone number** | EPR24174-24 |
| **Purification technique** | Affinity purification Protein A |
| **Concentration** | 1.013 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

## ICC/IF

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |

| | |
|---|---|
| **Notes** | - |

### Not recommended

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

## IP

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | - |

### Not recommended

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

## WB

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | - |

### Not recommended

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

## IHC-P

### Not recommended

| | |
|---|---|
| **Species** | Human, Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

## IHC-Fr

### Not recommended

| | |
|---|---|
| **Species** | Human, Rat, Mouse |
| **Dilution info** | - |
| **Notes** | - |

## Flow Cyt (Intra)

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | - |

### Not recommended

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

# Target data

See full target information SELENOP

| | |
|---|---|
| **Function** | Might be responsible for some of the extracellular antioxidant defense properties of selenium or might be involved in the transport of selenium. May supply selenium to tissues such as brain and testis. |

# Storage

| | |
|---|---|
| **Shipped at conditions** | Blue Ice |
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | +4°C |

## Notes

ab277537 is the carrier-free version of ab277526.

**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** | SEPP1 also known as Selenoprotein P is a glycoprotein characterized by multiple selenocysteine residues which play a critical role in its function. SEPP1 has a molecular mass of approximately 60 kDa. It expresses predominantly in the liver but can be found in other tissues like the brain kidney and plasma. In the liver it is involved in selenium transport and homeostasis carrying selenium to other tissues through the blood. |

| | |
|---|---|
| **Biological function summary** | SEPP1 acts as an antioxidant helping to defend cells against damage from reactive oxygen species. It exists as part of a complex system within the body to balance oxidative stress. Moreover SEPP1 contributes to the recycling of selenium in the body ensuring adequate supply for selenoprotein synthesis in various tissues. It serves essential functions in neurological health and immune response leveraging its selenium content to protect cells and maintain cellular activities. |
| **Pathways** | SEPP1 is significantly involved in selenium homeostasis and the oxidative stress response pathways. It interacts with proteins like glutathione peroxidase (GPx) and thioredoxin reductase which also depend on selenium for their antioxidant activities. The involvement of SEPP1 in these pathways is critical for mitigating oxidative damage and supporting the function of other selenium-dependent enzymes essential for maintaining cellular health. |
| **Associated diseases and disorders** | SEPP1 is associated with neurodegenerative diseases and certain types of cancer. Dysregulation of SEPP1 and selenium homeostasis may contribute to the development and progression of conditions such as Alzheimer's disease potentially involving interactions with amyloid precursor protein (APP) and tau proteins. In cancer alterations in SEPP1 expression have been linked to colorectal cancer through pathways intersecting with proteins influencing cell proliferation and apoptosis such as Bcl-2 and p53 indicating its potential role in tumor biology. |

## 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.

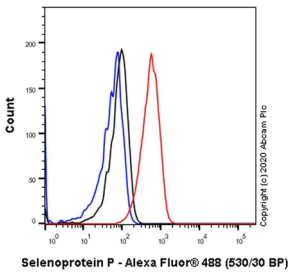
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We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

## 6 product images

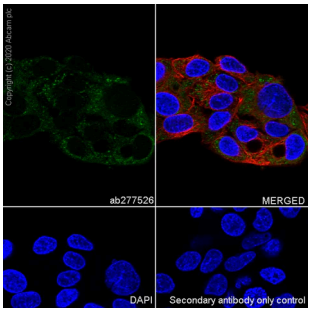



### Flow Cytometry (Intracellular) - Anti-SEPP1 antibody [EPR24174-24] - BSA and Azide free (ab277537)

SEPP1 Flow Cytometry (Intracellular) staining using rabbit Anti-SEPP1 antibody

This data was developed using ab277526, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol-permeabilized HepG2 (human hepatocellular carcinoma epithelial cell) cells labelling SEPP1 with ab277526 at 1/50 dilution (1ug) (Red) compared with a Rabbit monoclonal IgG (ab172730) isotype control (Black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).

A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.

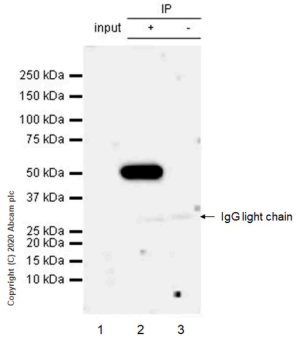



### Immunocytochemistry/ Immunofluorescence - Anti-SEPP1 antibody [EPR24174-24] - BSA and Azide free (ab277537)

SEPP1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-SEPP1 antibody

This data was developed using ab277526, the same antibody clone in a different buffer formulation.
Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HepG2 cells labelling SEPP1 with ab277526 at 1/50 (12.3 ug/ml) dilution, followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green). Confocal image showing cytoplasmic staining in HepG2 cell line. ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 dilution (Red). The Nuclear counterstain was DAPI (Blue).

Secondary antibody only control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.




### Immunoprecipitation - Anti-SEPP1 antibody [EPR24174-24] - BSA and Azide free (ab277537)

This data was developed using ab277526, the same antibody clone in a different buffer formulation.
SEPP1 was immunoprecipitated from 0.35 mg HepG2 (human hepatocellular carcinoma epithelial cell), whole cell lysate with ab277526 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab277526 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP)(ab131366) was used at 1/5000 dilution.

**Lane 1**: HepG2 (human hepatocellular carcinoma epithelial cell), whole cell lysate 10 ug

**Lane 2:** ab277526 IP in HepG2 whole cell lysate

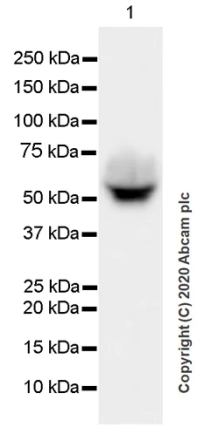
**Lane 3:** Rabbit monoclonal IgG (ab172730) instead of ab277526 in HepG2 whole cell lysate

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 3 minutes.
All lanes:
Immunoprecipitation - Anti-SEPP1 antibody [EPR24174-24] (ab277526)

Predicted band size: 43 kDa

Observed band size: 50 kDa




## Western blot - Anti-SEPP1 antibody [EPR24174-24] - BSA and Azide free (ab277537)

SEPP1 Western blot staining of Human plasma using rabbit Anti-SEPP1 antibody

This data was developed using ab277526, the same antibody clone in a different buffer formulation.
Blocking and diluting buffer and concentration: 5% NFDM/TBST.

The observed MW is consistent with what has been described in the literature (PMID:19345254, 27859223).

Exposure time: 10 seconds.

All lanes:
Western blot - Anti-SEPP1 antibody [EPR24174-24] (ab277526) at 1/1000 dilution

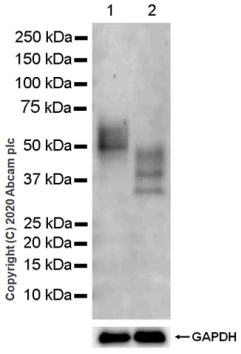
All lanes:
Human plasma at 10 µL

Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Predicted band size: 43 kDa

Observed band size: 50 kDa




## Western blot - Anti-SEPP1 antibody [EPR24174-24] - BSA and Azide free (ab277537)

SEPP1 Western blot staining using rabbit Anti-SEPP1 antibody

This data was developed using ab277526, the same antibody clone in a different buffer formulation.
Blocking and diluting buffer and concentration: 5% NFDM/TBST.

The observed MW is consistent with what has been described in the literature (PMID:19345254, 27859223).

This blot was developed using a higher sensitivity ECL substrate.

Exposure time: 3 minutes.

All lanes:
Western blot - Anti-SEPP1 antibody [EPR24174-24] (ab277526) at 1/1000 dilution

Lane 1:

HepG2 (human hepatocellar carcinoma epithelial cell) (treated with 300ng/ml Brefeldin A (BFA) for 24 hours) whole cell lysate at 15 µg

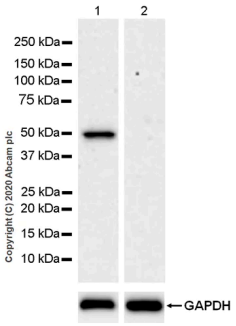
Lane 2:
HepG2 (treated with 300ng/ml Brefeldin A (BFA) for 24 hours) whole cell lysate treated with PNGase F at 15 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/20000 dilution

Predicted band size: 43 kDa

Observed band size: 35-47 kDa, 50-60 kDa




## Western blot - Anti-SEPP1 antibody [EPR24174-24] - BSA and Azide free (ab277537)

SEPP1 Western blot staining using rabbit Anti-SEPP1 antibody

This data was developed using ab277526, the same antibody clone in a different buffer formulation.
Blocking and diluting buffer and concentration: 5% NFDM/TBST.

The observed MW is consistent with what has been described in the literature (PMID:19345254, 27859223).

**Low expression:** Human skeletal muscle(PMID:23038251).

Exposure time: 3 minutes.

All lanes:
Western blot - Anti-SEPP1 antibody [EPR24174-24] (ab277526) at 1/1000 dilution

Lane 1:
Human liver tissue lysate at 20 µg

Lane 2:
Human skeletal muscle tissue lysate at 20 µg

Secondary

All lanes:
VeriBlot for IP secondary antibody(HRP)(ab131366) at 1/1000 dilution

Predicted band size: 43 kDa

Observed band size: 50 kDa

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