abcam

ab205535

# Anti-ELOVL5 antibody [EPR17151]

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** | EPR17151 |
| **Purification technique** | Affinity purification Protein A |
| **Specificity** | When testing sample with low protein level, we recommend uploading more amount of lysate, using lower antibody dilution, and using higher sensitivity ECL substrate.<br><br>We also recommend trying 1%SDS Hot lysis prepare method to get desired Western Blot results. |
| **Concentration** | 0.3 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

### WB

**Tested**

| | |
|---|---|
| **Species** | Mouse |
| **Dilution info** | 1/1000 |
| **Notes** | - |

| | |
|---|---|
| **Species** | Rat |
| **Dilution info** | 1/1000 |
| **Notes** | - |

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/1000 |
| **Notes** | - |

## ICC/IF

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/100 |
| **Notes** | - |

### Expected

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

## Flow Cyt (Intra)

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | 1/20 |
| **Notes** | - |

### Expected

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

## Target data

See full target information ELOVL5

| | |
|---|---|
| **Function** | Catalyzes the first and rate-limiting reaction of the four reactions that constitute the long-chain fatty acids elongation cycle. This endoplasmic reticulum-bound enzymatic process allows the addition of 2 carbons to the chain of long- and very long-chain fatty acids (VLCFAs) per cycle. Condensing enzyme that acts specifically toward polyunsaturated acyl-CoA with the higher activity toward C18:3(n-6) acyl-CoA. May participate in the production of monounsaturated and of polyunsaturated VLCFAs of different chain lengths that are involved in multiple biological processes as precursors of membrane lipids and lipid mediators (By similarity) (PubMed:10970790, PubMed:20937905). In conditions where the essential linoleic and alpha linoleic fatty acids are lacking it is also involved in the synthesis of Mead acid from oleic acid (By similarity). |

## Storage

| | |
|---|---|
| **Shipped at conditions** | Conditional Ambient |
| **Appropriate short-term storage duration** | 1-2 weeks |
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | -20°C |
| **Aliquoting information** | Upon delivery aliquot |
| **Storage information** | Avoid freeze / thaw cycle |

## 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** | ELOVL5 also known as elongation of very long chain fatty acids protein 5 is an important enzyme involved in the elongation process of fatty acids. It is part of a family that catalyzes the first and rate-limiting step of the elongation cycle adding two carbon units to the acyl chain. ELOVL5 is mainly found in tissues with high lipid metabolism including liver and brain with significant expression also noted in breast tissue. It has a molecular weight of approximately 33.5 kDa. |
| **Biological function summary** | ELOVL5 contributes to the metabolism of polyunsaturated fatty acids (PUFAs) which are important components of cell membranes and precursors to signaling molecules. It does not function alone but as part of a multi-enzyme complex that includes desaturases and reductases which enables the efficient synthesis of very long chain fatty acids (VLCFAs). These VLCFAs are critical for maintaining membrane fluidity and for cell signaling processes. |
| **Pathways** | ELOVL5 plays a significant role in the biosynthesis pathway of polyunsaturated fatty acids. It works alongside other enzymes such as desaturases to produce long-chain PUFAs from shorter precursor fatty acids. This process is important for the homeostasis of lipid signaling and membrane architecture. ELOVL5 also interacts with ELOVL6 another enzyme within the fatty acid elongation pathway indicating a coordinated interplay in fatty acid metabolism. |
| **Associated diseases and disorders** | Mutations or deficiencies in ELOVL5 can lead to conditions affecting lipid metabolism. One such disorder is spinocerebellar ataxia 38 (SCA38) a neurodegenerative disorder characterized by issues with movement and balance. Research also suggests a link between ELOVL5 and autism spectrum disorders (ASD) though this connection requires further investigation. In these disorders ELOVL5 often interacts with other proteins involved in lipid processing such as fatty acid synthase (FASN) underlying the complex nature of these diseases. |

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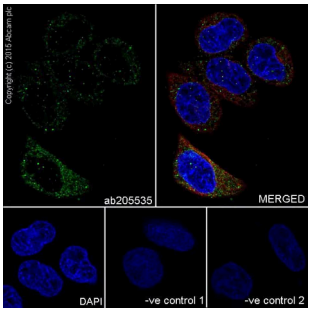
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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## 9 product images




### Immunocytochemistry/ Immunofluorescence - Anti-ELOVL5 antibody [EPR17151] (ab205535)

ELOVL5 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-ELOVL5 antibody

Immunofluorescent analysis of 100% methanol-fixed, 0.1% Triton X-100 permeabilized HeLa (Human epithelial cells from cervix adenocarcinoma) cells labeling ELOVL5 with ab205535 at 1/100 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green).
Confocal image showing cytoplasmic staining on HeLa cell line.

The nuclear counter stain is DAPI (blue).

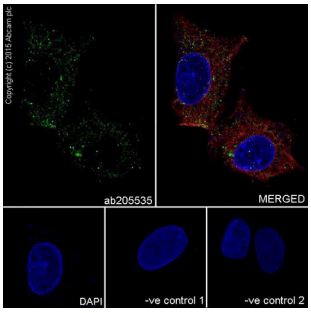
Tubulin is detected with ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution and ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/1000 dilution (red).

The negative controls are as follows:-

-ve control 1: ab205535 at 1/100 dilution followed by ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/1000 dilution.

-ve control 2: ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution followed by ab150077 (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/1000 dilution.

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### Immunocytochemistry/ Immunofluorescence - Anti-ELOVL5 antibody [EPR17151] (ab205535)

ELOVL5 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-ELOVL5 antibody

Immunofluorescent analysis of 100% methanol-fixed, 0.1% Triton X-100 permeabilized HepG2 (Human liver hepatocellular carcinoma) cells labeling ELOVL5 with ab205535 at 1/100 dilution, followed by Goat anti-rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green).
Confocal image showing cytoplasmic staining on HepG2 cell line.

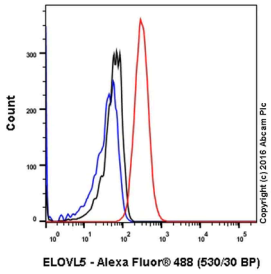
The nuclear counter stain is DAPI (blue).

Tubulin is detected with ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution and ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/1000 dilution (red).

The negative controls are as follows:-

-ve control 1: ab205535 at 1/100 dilution followed by ab150120 (AlexaFluor®594 Goat anti-Mouse secondary) at 1/1000 dilution.

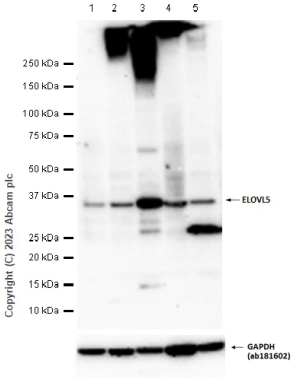
-ve control 2: ab7291 (anti-Tubulin mouse mAb) at 1/1000 dilution followed by ab150077 (Alexa Fluor®488 Goat Anti-Rabbit IgG H&L) at 1/1000 dilution.




## Flow Cytometry (Intracellular) - Anti-ELOVL5 antibody [EPR17151] (ab205535)

ELOVL5 Flow Cytometry (Intracellular) staining using rabbit Anti-ELOVL5 antibody

Intracellular Flow Cytometry analysis ofHeLa cells labelling ELOVL5 with ab205535 at 1/20 (red). Cells were fixed with 4% paraformaldehyde and permeabilized with 90% methanol. An Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/2000) was used as the secondary antibody. Black - Isotype control, rabbit monoclonal IgG. Blue - Unlabelled control, cells without incubation with primary and secondary antibodies.




## Western blot - Anti-ELOVL5 antibody [EPR17151] (ab205535)

**Blocking buffer and concentration:** 5% NFDM/TBST. **Diluting buffer and concentration:** 5% NFDM/TBST. When testing sample with low protein level, we recommend uploading more amount of lysate, using lower antibody dilution, and using higher sensitivity ECL substrate. We also recommend trying 1%SDS Hot lysis prepare method to get desired Western Blot results.
All lanes:
Western blot - Anti-ELOVL5 antibody [EPR17151] (ab205535) at 1/1000 dilution

Lane 1:
HepG2 (Human hepatocellular carcinoma epithelial cell) whole cell lysate prepared in RIPA lysis method at 20 µg

Lane 2:
MCF7 (Human breast adenocarcinoma epithelial cell) whole cell lysate prepared in RIPA lysis method at 20 µg

Lane 3:
MCF7 (Human breast adenocarcinoma epithelial cell) whole cell lysate prepared in 1%SDS Hot lysis method at 20 µg

Lane 4:
HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate prepared in RIPA lysis method at 20 µg

Lane 5:
HeLa (Human cervix adenocarcinoma epithelial cell) whole cell lysate prepared in 1%SDS Hot lysis method at 20 µg

Secondary

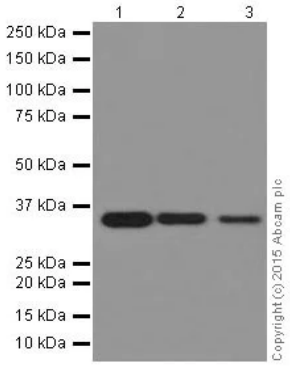
All lanes:

Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 35 kDa

Observed band size: 35 kDa

Exposure time: 180s




## Western blot - Anti-ELOVL5 antibody [EPR17151] (ab205535)

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-ELOVL5 antibody [EPR17151] (ab205535) at 1/1000 dilution

Lane 1:
Human fetal brain lysate at 10 µg

Lane 2:
Human fetal heart lysate at 10 µg

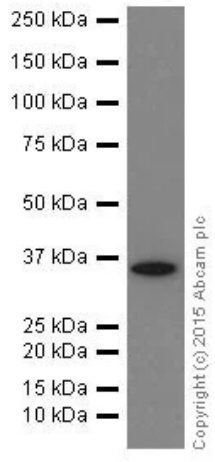
Lane 3:
Human fetal kidney lysate at 10 µg

Secondary

All lanes:
Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/10000 dilution

Predicted band size: 35 kDa

Exposure time: 30s




## Western blot - Anti-ELOVL5 antibody [EPR17151] (ab205535)

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-ELOVL5 antibody [EPR17151] (ab205535) at 1/1000 dilution

All lanes:
Human testis lysate at 10 µg

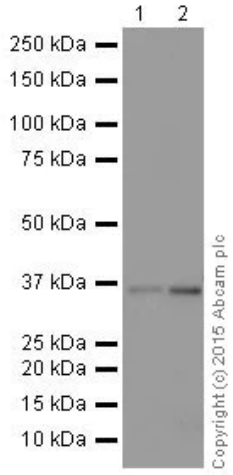
Secondary

All lanes:
Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/10000 dilution

Predicted band size: 35 kDa

Observed band size: 35 kDa

Exposure time: 3min




## Western blot - Anti-ELOVL5 antibody [EPR17151] (ab205535)

ELOVL5 Western blot staining using rabbit Anti-ELOVL5 antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-ELOVL5 antibody [EPR17151] (ab205535) at 1/1000 dilution

Lane 1:
C6 (Rat glial tumor cells) whole cell lysate at 10 µg

Lane 2:
RAW 264.7 (Mouse macrophage cells transformed with Abelson murine leukemia virus) whole cell lysate at 10 µg

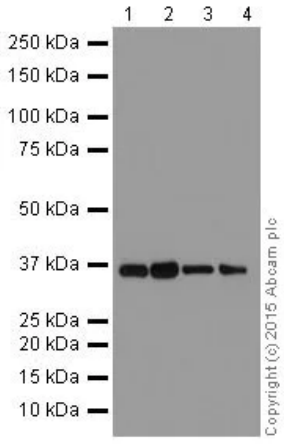
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/10000 dilution

Predicted band size: 35 kDa

Observed band size: 35 kDa

Exposure time: 30s




## Western blot - Anti-ELOVL5 antibody [EPR17151] (ab205535)

ELOVL5 Western blot staining using rabbit Anti-ELOVL5 antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-ELOVL5 antibody [EPR17151] (ab205535) at 1/1000 dilution

Lane 1:
Rat brain lysate at 10 µg

Lane 2:
Rat heart lysate at 10 µg

Lane 3:
Rat kidney lysate at 10 µg

Lane 4:
Rat spleen lysate at 10 µg

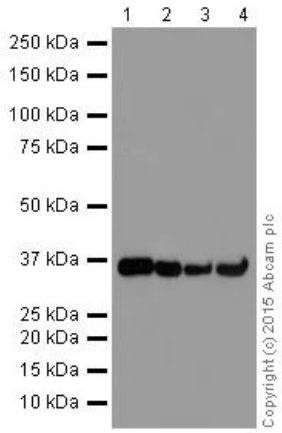
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/10000 dilution

Predicted band size: 35 kDa

Observed band size: 35 kDa

Exposure time: 15s




# Western blot - Anti-ELOVL5 antibody [EPR17151] (ab205535)

ELOVL5 Western blot staining using rabbit Anti-ELOVL5 antibody

Blocking/Dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-ELOVL5 antibody [EPR17151] (ab205535) at 1/1000 dilution

Lane 1:
Mouse brain lysate at 10 µg

Lane 2:
Mouse heart lysate at 10 µg

Lane 3:
Mouse kidney lysate at 10 µg

Lane 4:
Mouse spleen lysate at 10 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/10000 dilution

Predicted band size: 35 kDa

Observed band size: 35 kDa

Exposure time: 3min

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