


## Product datasheet

# Alexa Fluor® 647 Anti-Caveolin-1 antibody [EPR15554] - N-terminal ab225381

**KO** **VALIDATED** **Recombinant** **RabMAb**

5 Images

### Overview

<b>Product name</b>	Alexa Fluor® 647 Anti-Caveolin-1 antibody [EPR15554] - N-terminal
<b>Description</b>	Alexa Fluor® 647 Rabbit monoclonal [EPR15554] to Caveolin-1 - N-terminal
<b>Host species</b>	Rabbit
<b>Conjugation</b>	Alexa Fluor® 647. Ex: 652nm, Em: 668nm
<b>Tested applications</b>	<b>Suitable for:</b> ICC, Flow Cyt (Intra)
<b>Species reactivity</b>	<b>Reacts with:</b> Human <b>Predicted to work with:</b> Mouse 
<b>Immunogen</b>	Recombinant fragment within Human Caveolin-1 aa 1-100 (N terminal). The exact immunogen sequence used to generate this antibody is proprietary information. If additional detail on the immunogen is needed to determine the suitability of the antibody for your needs, please <b><u>contact</u></b> our Scientific Support team to discuss your requirements. Database link: <b><u>Q03135</u></b>
<b>Positive control</b>	ICC: HeLa and A673 cells. Flow Cyt (intra): A673 and HeLa cells
<b>General notes</b>	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> <p>For more information <b><u>see here</u></b>.</p> <p>Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <b><u>RabMAb® patents</u></b>.</p> <p>Alexa Fluor® is a registered trademark of Molecular Probes, Inc, a Thermo Fisher Scientific Company. The Alexa Fluor® dye included in this product is provided under an intellectual property license from Life Technologies Corporation. As this product contains the Alexa Fluor® dye, the purchase of this product conveys to the buyer the non-transferable right to use the purchased product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). As this product contains the Alexa Fluor® dye the sale of this product is expressly conditioned on the buyer not using the product or its components, or any materials made using the product or its components, in any activity to generate revenue, which may include, but is not limited to use of the product or its components: in manufacturing; (ii) to</p>

provide a service, information, or data in return for payment (iii) for therapeutic, diagnostic or prophylactic purposes; or (iv) for resale, regardless of whether they are sold for use in research. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, 5781 Van Allen Way, Carlsbad, CA 92008 USA or [outlicensing@thermofisher.com](mailto:outlicensing@thermofisher.com).

## Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle. Store In the Dark.
<b>Storage buffer</b>	pH: 7.40 Preservative: 0.02% Sodium azide Constituents: 30% Glycerol (glycerin, glycerine), 1% BSA, PBS
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR15554
<b>Isotype</b>	IgG

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab225381 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC		1/100. This product gave a positive signal in A673 cells fixed with 4% formaldehyde (10 min) and 100% methanol (5 min).
Flow Cyt (Intra)		1/500000.

## Target

<b>Function</b>	May act as a scaffolding protein within caveolar membranes. Interacts directly with G-protein alpha subunits and can functionally regulate their activity (By similarity). Involved in the costimulatory signal essential for T-cell receptor (TCR)-mediated T-cell activation. Its binding to DPP4 induces T-cell proliferation and NF-kappa-B activation in a T-cell receptor/CD3-dependent manner. Recruits CTNNB1 to caveolar membranes and may regulate CTNNB1-mediated signaling through the Wnt pathway.
<b>Tissue specificity</b>	Expressed in muscle and lung, less so in liver, brain and kidney.
<b>Involvement in disease</b>	Defects in CAV1 are the cause of congenital generalized lipodystrophy type 3 (CGL3) [MIM:612526]; also called Berardinelli-Seip congenital lipodystrophy type 3 (BSCL3). Congenital generalized lipodystrophies are autosomal recessive disorders characterized by a near absence

of adipose tissue, extreme insulin resistance, hypertriglyceridemia, hepatic steatosis and early onset of diabetes.

### Sequence similarities

Belongs to the caveolin family.

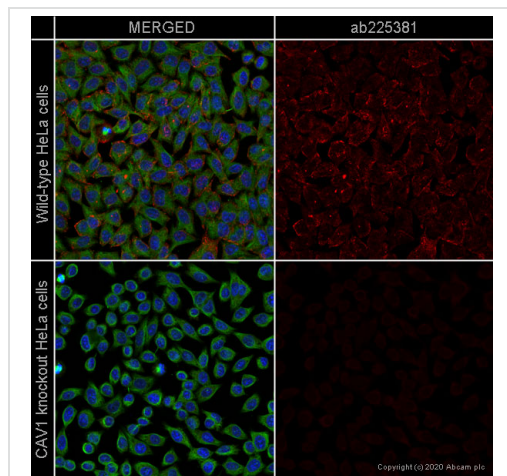
### Post-translational modifications

The initiator methionine for isoform Beta is removed during or just after translation. The new N-terminal amino acid is then N-acetylated.

### Cellular localization

Golgi apparatus membrane. Cell membrane. Membrane > caveola. Membrane raft. Colocalized with DPP4 in membrane rafts. Potential hairpin-like structure in the membrane. Membrane protein of caveolae.

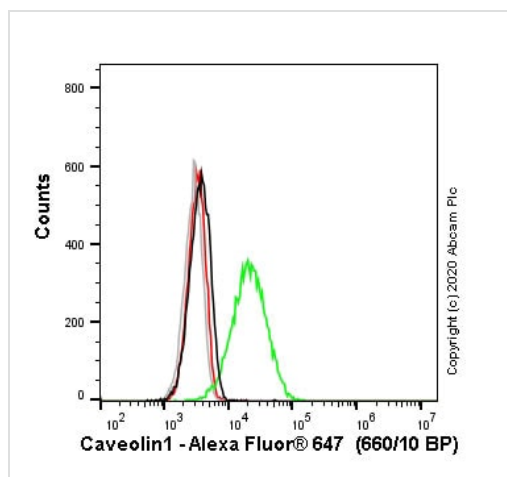
## Images



Immunocytochemistry - Alexa Fluor® 647 Anti-Caveolin-1 antibody [EPR15554] - N-terminal (ab225381)

ab225381 staining Caveolin-1 in wild-type HeLa cells (top panel) and CAV1 knockout HeLa cells ([ab255371](#)) (bottom panel). The cells were fixed with 100% methanol (5 min) then permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with ab225381 at 1/500 dilution and [ab195887](#) (Mouse monoclonal to alpha Tubulin - Alexa Fluor® 488) at 1/250 dilution overnight at 4°C. Nuclear DNA was labelled in blue with DAPI.

Image was taken with a confocal microscope (Leica-Microsystems TCS SP8).

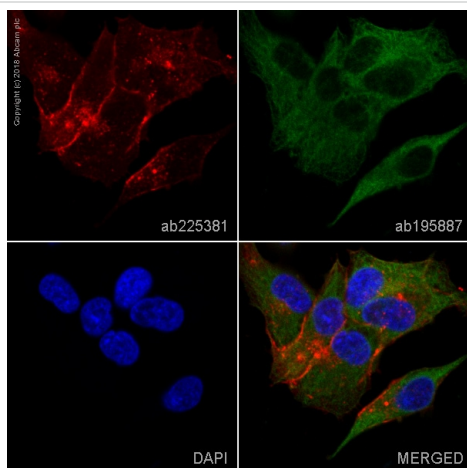


Flow Cytometry (Intracellular) - Alexa Fluor® 647 Anti-Caveolin-1 antibody [EPR15554] - N-terminal (ab225381)

Flow cytometry overlay histogram showing wild-type (green line) and CAV1 knockout ([ab255371](#)) HeLa cells stained with ab225381 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Triton X-100 for 15 min. The cells were then incubated in 1x PBS containing 10% normal goat serum to block non-specific protein-protein interaction followed by the antibody (ab225381) ( $1 \times 10^6$  in 100µl at 0.008µg/ml (1/62500) for 30 min at 22°C.

Isotype control antibody (black line) was Rabbit IgG (monoclonal) Alexa Fluor® 647 ([ab199093](#)) used at the same concentration and conditions as the primary antibody (wild-type - black line knockout - grey line). Unlabelled sample was also used as a control (this line is not shown for the purpose of simplicity).

Acquisition of >5000 events were collected using a 40 mW Red laser (640nm) and 660/10 bandpass filter.

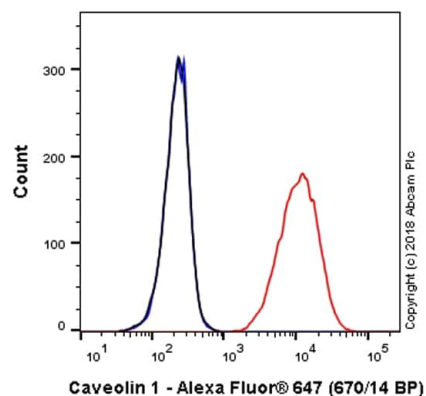


Immunocytochemistry - Alexa Fluor® 647 Anti-Caveolin-1 antibody [EPR15554] - N-terminal (ab225381)

ab225381 staining Caveolin-1 in A673 cells. The cells were fixed with 100% methanol (5 min), permeabilized with 0.1% Triton X-100 for 5 minutes and then blocked with 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated overnight at +4°C with ab225381 at 1/100 dilution (shown in red) and **ab195887**, Mouse monoclonal to alpha Tubulin (Alexa Fluor® 488), at 1/250 dilution (shown in green). Nuclear DNA was labelled with DAPI (shown in blue).

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

This product also gave a positive signal under the same testing conditions in A673 cells fixed with 4% formaldehyde (10 min).



Flow Cytometry (Intracellular) - Alexa Fluor® 647 Anti-Caveolin-1 antibody [EPR15554] - N-terminal (ab225381)

Overlay histogram showing A673 cells stained with ab225381 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Triton X-100 for 15 min. The cells were then incubated in 1x PBS / 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (ab225381, 1/500000 dilution) for 30 min at 22°C.

Isotype control antibody (black line) was Rabbit IgG (monoclonal) Alexa Fluor® 647 (**ab199093**) used at the same concentration and conditions as the primary antibody. Unlabelled sample (blue line) was also used as a control.

Acquisition of >5,000 events were collected using a 40 mW Red laser (640nm) and 670/14 bandpass filter.

This antibody gave a positive signal in A673 cells fixed with 4% formaldehyde (10 min)/permeabilized with 0.1% PBS-Triton X-100 for 15 min used under the same conditions.

### Why choose a recombinant antibody?



**Research with confidence**  
Consistent and reproducible results



**Long-term and scalable supply**  
Recombinant technology



**Success from the first experiment**  
Confirmed specificity



**Ethical standards compliant**  
Animal-free production

Alexa Fluor® 647 Anti-Caveolin-1 antibody  
[EPR15554] - N-terminal (ab225381)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

### Our Abpromise to you: Quality guaranteed and expert technical support

---

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

### Terms and conditions

---

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors