Product Datasheet

Caveolin-1 Antibody (7C8)
NB100-615

Unit Size: 0.1 ml
Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.

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### NB100-615
Caveolin-1 Antibody (7C8)

#### Product Information

<table>
<thead>
<tr>
<th><strong>Unit Size</strong></th>
<th>0.1 ml</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Concentration</strong></td>
<td>1.0 mg/ml</td>
</tr>
<tr>
<td><strong>Storage</strong></td>
<td>Aliquot and store at -20°C or -80°C. Avoid freeze-thaw cycles.</td>
</tr>
<tr>
<td><strong>Clonality</strong></td>
<td>Monoclonal</td>
</tr>
<tr>
<td><strong>Clone</strong></td>
<td>7C8</td>
</tr>
<tr>
<td><strong>Preservative</strong></td>
<td>0.05% Sodium Azide</td>
</tr>
<tr>
<td><strong>Isotype</strong></td>
<td>IgG2b</td>
</tr>
<tr>
<td><strong>Purity</strong></td>
<td>Protein A purified</td>
</tr>
<tr>
<td><strong>Buffer</strong></td>
<td>Tris-Glycine, 0.15 M NaCl</td>
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<tr>
<td><strong>Target Molecular Weight</strong></td>
<td>23 kDa</td>
</tr>
</tbody>
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#### Product Description

<table>
<thead>
<tr>
<th><strong>Host</strong></th>
<th>Mouse</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gene ID</strong></td>
<td>857</td>
</tr>
<tr>
<td><strong>Gene Symbol</strong></td>
<td>CAV1</td>
</tr>
<tr>
<td><strong>Species</strong></td>
<td>Human, Mouse, Rat, Sheep</td>
</tr>
<tr>
<td><strong>Marker</strong></td>
<td>Caveolae Marker, Endosome Marker</td>
</tr>
<tr>
<td><strong>Specificity/Sensitivity</strong></td>
<td>This is specific for caveolin alpha and beta proteins.</td>
</tr>
<tr>
<td><strong>Immunogen</strong></td>
<td>Intracellular membrane protein-containing vesicles (containing GLUT4) from rat adipocytes</td>
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#### Product Application Details

<table>
<thead>
<tr>
<th><strong>Applications</strong></th>
<th>Western Blot, Flow Cytometry, Immunocytochemistry/Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, Immunoprecipitation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recommended Dilutions</strong></td>
<td>Western Blot 1:1000 - 1:4000, Flow Cytometry 1 ug per million cells, Immunohistochemistry 1:100 - 1:300, Immunocytochemistry/Immunofluorescence 1:200, Immunoprecipitation, Immunohistochemistry-Paraffin 1:100 - 1:300, Immunohistochemistry-Frozen</td>
</tr>
<tr>
<td><strong>Application Notes</strong></td>
<td>In Western blot, a band is observed ~23 kDa, representing the Caveolin 1 protein. A band at ~21 kDa may also be observed depending on the lysates used. Use in Immunohistochemistry-Frozen reported in scientific literature (PMID: 24758774)</td>
</tr>
</tbody>
</table>
Western Blot: Caveolin-1 Antibody (7C8) [NB100-615] - Detection of caveolin in 3T3 cell lysates (50 ug). Lanes 1 and 2: 1:4000. Lanes 3 and 4: 1:1000. Detection by ECL: 5 minute exposure.

Immunocytochemistry/Immunofluorescence: Caveolin-1 Antibody (7C8) [NB100-615] - HeLa cells were fixed for 10 minutes using 10% formalin and then permeabilized for 5 minutes using 1X PBS + 0.05% Triton X-100. The cells were incubated with anti-Caveolin-1 [7C8] conjugated to Alexa Fluor 488 (NB100-615AF488) at 20 ug/mL for 1 hour at room temperature. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 40X objective.

Flow Cytometry: Caveolin-1 Antibody (7C8) [NB100-615] - An intracellular stain was performed on HeLa cells with Caveolin-1 Antibody (7C8) NB100-615APC (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 1 ug/mL for 30 minutes at room temperature. Both antibodies were conjugated to allophycocyanin.

Immunocytochemistry/Immunofluorescence: Caveolin-1 Antibody (7C8) [NB100-615] - Antibody at 1:200 dilution (ON incubation) on EaHy926 endothelial cell line showing a clear localization in lipid raft/membrane. Photo courtesy of Alberto Davalos, Yale School of Medicine.
Flow Cytometry: Caveolin-1 Antibody (7C8) [NB100-615] - Intracellular flow cytometric staining of 1 x 10^6 CHO (A) and HEK-293 (B) cells using Caveolin 1 antibody (dark blue). Isotype control shown in orange. An antibody concentration of 1 ug/1x10^6 cells was used.

Flow Cytometry: Caveolin-1 Antibody (7C8) [NB100-615] - An intracellular stain was performed on HeLa cells with Caveolin-1 Antibody (7C8) NB100-615 (blue) and a matched isotype control (orange). Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 5 ug/mL for 30 minutes at room temperature, followed by mouse F(ab)2 IgG (H+L) APC-conjugated secondary antibody (F0101B, R&D Systems).
Publications

Arima Mitsuru, Cui Dan, Kimura Tokuhiro et al. Basigin can be a therapeutic target to restore the retinal vascular barrier function in the mouse model of diabetic retinopathy. Scientific Reports 2016 [PMID: 27917946] (WB, ICC/IF, Mouse)


Yokomori H, Ando W, Yoshimura K et al. Increases in endothelial caveolin-1 and cavins correlate with cirrhosis progression. Micron 2015 Sep [PMID: 26086560] (Human)


Boyce AK, Kim MS, Wicki-Stordeur LE, Swayne LA et al. ATP stimulates Pannexin 1 internalisation to endosomal compartments Biochem. J. 2015 Jul 20 [PMID: 26195825] (ICC/IF, Mouse)


More publications at http://www.novusbio.com/NB100-615
Procedures
Protocol specific for Caveolin 1 Antibody (NB100-615)

Western Blot Protocol

1. Perform SDS-PAGE (4-12%) on samples to be analyzed, loading 50ug of total protein per lane.

2. Transfer proteins to Nitrocellulose according to the instructions provided by the manufacturer of the transfer apparatus.

3. Stain the blot using ponceau S for 1-2 minutes to access the transfer of proteins onto the nitrocellulose membrane. Rinse the blot in water to remove excess stain and mark the lane locations and locations of molecular weight markers using a pencil.

4. Rinse the blot in TBS for approximately 5 minutes.

5. Block the membrane using 5% non-fat dry milk in TBS for 1 hour.

6. Dilute the mouse anti-Caveolin primary antibody (NB 100-615) in blocking buffer and incubate 3 hours at room temperature.

7. Wash the membrane in water for 5 minutes and apply the diluted mouse-IgG HRP-conjugated secondary antibody in blocking buffer (as per manufacturer's instructions) and incubate 1 hour at room temperature.

8. Wash the blot in TBS containing 0.05-0.1% Tween-20 for 10-20 minutes.

9. Wash the blot in type I water for an additional 10-20 minutes (this step can be repeated as required to reduce background).

10. Apply the detection reagent of choice in accordance with the manufacturer's instructions (Amersham's ECL is the standard reagent used at Novus Biologicals).

Note: Tween-20 can be added to the blocking buffer at a final concentration of 0.05-0.2%, provided it does not interfere with antibody-antigen binding.
Limitations
This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

For more information on our 100% guarantee, please visit www.novusbio.com/guarantee

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