Product Datasheet

CD68/SR-D1 Antibody (FA-11) - BSA Free

**NBP2-33337**

Unit Size: 0.1 mg

Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze-thaw cycles.

Publications: 34

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# NBP2-33337
## CD68/SR-D1 Antibody (FA-11) - BSA Free

### Product Information

<table>
<thead>
<tr>
<th><strong>Unit Size</strong></th>
<th>0.1 mg</th>
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<tbody>
<tr>
<td><strong>Concentration</strong></td>
<td>1.0 mg/ml</td>
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<td><strong>Storage</strong></td>
<td>Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze-thaw cycles.</td>
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<tr>
<td><strong>Clonality</strong></td>
<td>Monoclonal</td>
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<tr>
<td><strong>Clone</strong></td>
<td>FA-11</td>
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<tr>
<td><strong>Preservative</strong></td>
<td>0.02% Sodium Azide</td>
</tr>
<tr>
<td><strong>Isotype</strong></td>
<td>IgG2a</td>
</tr>
<tr>
<td><strong>Purity</strong></td>
<td>Protein G purified</td>
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<tr>
<td><strong>Buffer</strong></td>
<td>PBS</td>
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### Product Description

- **Host**: Rat
- **Gene ID**: 968
- **Gene Symbol**: CD68
- **Species**: Mouse
- **Immunogen**: This CD68/SR-D1 Antibody (FA-11) was developed against purified ConA acceptor glycoproteins from the P815 cell line.

### Product Application Details

- **Applications**: Western Blot, Flow Cytometry, Flow (Intracellular), Functional, Immunocytochemistry/Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, Immunoprecipitation, Single Cell Western


- **Application Notes**: Use in IHC, ICC/IF reported in scientific literature (PMID:34478932). Use in functional reported in scientific literature (PMID: 11085350). For Flow Cytometry: Use 10 ul of suggested dilution to label 10^6 cells in 100 ul. IHC requires antigen retrieval using heat treatment prior to staining of paraffin sections. Sodium citrate buffer pH 6.0 is recommended for this purpose.
Images

Immunohistochemistry-Paraffin: CD68/SR-D1 Antibody (FA-11) [NBP2-33337] - Mouse spleen cryosection.

Immunohistochemistry-Paraffin: CD68/SR-D1 Antibody (FA-11) [NBP2-33337] - Mouse spleen.

Immunocytochemistry/Immunofluorescence: CD68/SR-D1 Antibody (FA-11) [NBP2-33337] - Wehi-3 cells were fixed for 10 minutes using 10% formalin and then permeabilized for 5 minutes using 1X TBS + 0.5% Triton X-100. The cells were incubated with anti CD68 (FA-11) [NBP2-33337] at a 1:100 dilution overnight at 4C and detected with an anti-rat DyLight 488 (Green) at a 1:500 dilution. Actin was detected with Phalloidin 568 (Red) at a 1:200 dilution. Nuclei were counterstained with DAPI (Blue). Cells were imaged using a 40X objective.

Flow (Intracellular): CD68/SR-D1 Antibody (FA-11) [NBP2-33337] - An intracellular stain was performed on Raw 246.7 cells with CD68/SR-D1 (FA-11) antibody NBP2-33337 (blue) and a matched isotype control MAB006 (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, followed by DyLight488-conjugated anti-rat secondary antibody.
Western Blot: CD68/SR-D1 Antibody (FA-11) [NBP2-33337] - Expression on J774 cells.

Flow Cytometry: CD68/SR-D1 Antibody (FA-11) [NBP2-33337] - An intracellular stain was performed on Raw264.7 cells with CD68/SR-D1 Antibody (FA-11) NBP2-33337B (blue) and a matched isotype control (orange). Both antibodies were conjugated to Biotin. Cells were fixed with 4% PFA and then permeabilized with 0.1% saponin. Cells were incubated in an antibody dilution of 2.5 ug/mL for 30 minutes at room temperature, followed by Streptavidin - R-Phycoerythrin Protein (2012-1000, Novus Biologicals).

Flow Cytometry: CD68/SR-D1 Antibody (FA-11) [NBP2-33337] - Staining of permeabilised Mouse peritoneal Macrophages cells with Rat anti Mouse CD68 Antibody (Clone FA-11) visualised with F(ab’2) Goat Anti Rat IgG:FITC (Mouse Adsorbed).
### Publications

<table>
<thead>
<tr>
<th>Authors</th>
<th>Title</th>
<th>Journal</th>
<th>Date</th>
<th>PMID</th>
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<tbody>
<tr>
<td>Chung BS, Liao IC, Lin PC et al.</td>
<td>PD-L1 Expression in High-Risk Early-Stage Colorectal Cancer-Its Clinical and Biological Significance in Immune Microenvironment</td>
<td>International journal of molecular sciences</td>
<td>2022-10-31</td>
<td>36362062</td>
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<td>Richner M, GonCalves NP, Jensen PH et al.</td>
<td>Recombinant adeno-associated virus mediated gene delivery in the extracranial nervous system of adult mice by direct nerve immersion</td>
<td>STAR Protocols</td>
<td>2022-03-01</td>
<td>35243373</td>
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<td>Feng L, Wang Q, Li Y et al.</td>
<td>Ablation of Hypoxia-induced mitogenic factor promotes cardiac repair after myocardial infarction by downregulating matrix metalloproteinase-9 expression in macrophage</td>
<td>Research Square</td>
<td>2021-09-15</td>
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<td>Huang J, Fan C, Chen Y Et al.</td>
<td>Single-cell RNA-seq reveals functionally distinct biomaterial degradation-related macrophage populations</td>
<td>Biomaterials</td>
<td>2021-10-01</td>
<td>34478932</td>
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<td>Li Y, Dong M, Wang Q et al.</td>
<td>HIMF deletion ameliorates acute myocardial ischemic injury by promoting macrophage transformation to reparative subtype</td>
<td>Cardiology</td>
<td>2021-04-23</td>
<td>33893593</td>
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<td>Magarotto F, Sgrò A, Dorigo Hochuli AH, et al.</td>
<td>Muscle functional recovery is driven by extracellular vesicles combined with muscle extracellular matrix in a volumetric muscle loss murine model</td>
<td>Biomaterials</td>
<td>2021-01-07</td>
<td>33461058</td>
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<td>Tian S, Nakamura J, Hiller S et al.</td>
<td>New insights into immunomodulation via overexpressing lipoic acid synthase as a therapeutic potential to reduce atherosclerosis</td>
<td>Vascul. Pharmacol.</td>
<td>2020-08-01</td>
<td>32750408</td>
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<td>Chen YF, Chen LH, Yeh YM et al.</td>
<td>Minoxidil is a potential neuroprotective drug for paclitaxel-induced peripheral neuropathy.</td>
<td>Sci Rep.</td>
<td>2017-03-28</td>
<td>28349969</td>
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Details: This citation used the FITC version of this antibody.

Procedures

Flow (Intracellular) Protocol for CD68/SR-D1 Antibody (NBP2-33337)

Protocol for Flow Cytometry Intracellular Staining

Sample Preparation.
1. Grow cells to 60-85% confluency. Flow cytometry requires between 2 x 10^5 and 1 x 10^6 cells for optimal performance.
2. If cells are adherent, harvest gently by washing once with staining buffer and then scraping. Avoid using trypsin as this can disrupt certain epitopes of interest. If enzymatic harvest is required, use Accutase, Collagenase, or TrypLE Express for a less damaging option.
3. Reserve 100 μL for counting, then transfer cell volume into a 50 mL conical tube and centrifuge for 8 minutes at 400 RCF.
   a. Count cells using a hemocytometer and a 1:1 trypan blue exclusion stain to determine cell viability before starting the flow protocol. If cells appear blue, do not proceed.
4. Re-suspend cells to a concentration of 1 x 10^6 cells/mL in staining buffer (NBP2-26247).

Tip: When cell surface and intracellular staining are required in the same sample, it is advisable that the cell surface staining be performed first since the fixation and permeabilization steps might reduce the availability of surface antigens.

Intracellular Staining.
Tip: When performing intracellular staining, it is important to use appropriate fixation and permeabilization reagents based upon the target and its subcellular location. Generally, our Intracellular Flow Assay Kit (NBP2-29450) is a good place to start as it contains an optimized combination of reagents for intracellular staining as well as an inhibitor of intracellular protein transport (necessary if staining secreted proteins). Certain targets may require more gentle or transient permeabilization protocols such as the commonly employed methanol or saponin-based methods.

Protocol for Cytoplasmic Targets:
1. Fix the cells by adding 100 μL fixation solution (such as 4% PFA) to each sample for 10-15 minutes.
2. Permeabilize cells by adding 100 μL of a permeabilization buffer to every 1 x 10^6 cells present in the sample. Mix well and incubate at room temperature for 15 minutes.
   a. For cytoplasmic targets, use a gentle permeabilization solution such as 1X PBS + 0.5% Saponin or 1X PBS + 0.5% Tween-20.
   b. To maintain the permeabilized state throughout your experiment, use staining buffer + 0.1% of the permeabilization reagent (i.e. 0.1% Tween-20 or 0.1% Saponin).
3. Following the 15 minute incubation, add 2 mL of the staining buffer + 0.1% permeabilizer to each sample.
4. Centrifuge for 1 minute at 400 RCF.
5. Discard supernatant and re-suspend in 100 μL of staining buffer + 0.1% permeabilizer.
6. Add appropriate amount of each antibody (eg. 1 test or 1 ug per sample, as experimentally determined).
7. Mix well and incubate at room temperature for 30 minutes- 1 hour. Gently mix samples every 10-15 minutes.
8. Following the primary/conjugate incubation, add 1-2 mL/sample of staining buffer +0.1% permeabilizer and centrifuge for 1 minute at 400 RCF.
9. Wash twice by re-suspending cells in staining buffer (2 mL for tubes or 200 uL for wells) and centrifuging at 400 RCF for 5 minutes. Discard supernatant.
10. Add appropriate amount of secondary antibody (as experimentally determined) to each sample.
11. Incubate at room temperature in dark for 20 minutes.
12. Add 1-2 mL of staining buffer and centrifuge at 400 RCF for 1 minute and discard supernatant.
13. Wash twice by re-suspending cells in staining buffer (2 mL for tubes or 200 uL for wells) and centrifuging at 400 RCF for 5 minutes. Discard supernatant.
14. Resuspend in an appropriate volume of staining buffer (usually 500 uL per sample) and proceed with analysis on your flow cytometer.
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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