Alexa Fluor® 647 Mouse Anti-Human MNDA

Product Information

<table>
<thead>
<tr>
<th>Material Number:</th>
<th>566582</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alternate Name:</td>
<td>MNDA; Myeloid cell nuclear differentiation antigen; PYHIN3</td>
</tr>
<tr>
<td>Size:</td>
<td>50 µg</td>
</tr>
<tr>
<td>Concentration:</td>
<td>0.2 mg/ml</td>
</tr>
<tr>
<td>Clone:</td>
<td>253 (also known as 253A)</td>
</tr>
<tr>
<td>Immunogen:</td>
<td>Human MNDA</td>
</tr>
<tr>
<td>Isotype:</td>
<td>Mouse (BALB/c) IgG1, κ</td>
</tr>
<tr>
<td>Reactivity:</td>
<td>QC Testing: Human</td>
</tr>
<tr>
<td>Storage Buffer:</td>
<td>Aqueous buffered solution containing protein stabilizer and ≤0.09% sodium azide.</td>
</tr>
</tbody>
</table>

Description

The monoclonal antibody 253 specifically recognizes Myeloid cell nuclear differentiation antigen (MNDA) that is encoded by MNDA which belongs to the Pyrin and Hin domain gene family. MNDA functions as a transcriptional activator or repressor in cells of the myeloid lineage including cells from the promyelocyte stage onwards to granulocytes, monocytes and macrophages. Expression of this transcription factor is upregulated by monocytes in response to Interferon alpha (IFN-α) stimulation. MNDA may also be lowly expressed in a subset of B cells and by cells in some nodal marginal zone lymphomas (NMZL) and chronic lymphocytic leukemias (CLL).

Analyses of MNDA Expression

1. Human Peripheral Blood Leucocytes. Blood was treated with BD Pharm Lyse™ Lysing Buffer (Cat. No. 555899) to remove erythrocytes and then treated with BD Pharmingen™ Transcription Factor Phospho Buffer Set (Cat. No. 563239) to fix and permeabilize cells. Cells were stained with Alexa Fluor® 647 Mouse IgG1, κ Isotype Control (Cat. No. 557732; Left Plot) or Alexa Fluor® 647 Mouse Anti-Human MNDA (Cat. No. 566582; Right Plot) at 0.06 µg/test.

2. Human U937 Cells. Human U937 (Histiocytic lymphoma, ATCC CRL-1593) cells were fixed and permeabilized with BD Pharmingen™ Transcription Factor Buffer Set (Cat. No. 562725) and stained with Alexa Fluor® 647 Mouse IgG1, κ Isotype Control (dashed line histogram) or Alexa Fluor® 647 Mouse Anti-Human MNDA (solid line histogram) at 0.5 µg/test. Flow cytometric figures showing the expression of MNDA (or Ig isotype control staining) were derived from gated events with the forward and side light-scatter characteristics of intact cells. Flow cytometric analyses were performed using a BD LSRFortessa™ X-20 Flow Cytometer System.

3. Human Spleen. Following antigen retrieval with BD Retrievagen A Buffer (Cat. No. 550524), a section from formalin-fixed, paraffin-embedded human spleen was stained with Alexa Fluor® 647 Mouse Anti-MNDA (Cat. No.566582) and BD Horizon™ BV421 Mouse Anti-Human CD45 (Cat. No. 563879) antibodies at 1.0 µg/test. Immunohistofluorescent staining of MNDA revealed nuclear staining (pseudocolored red) of some cells that also showed expression of plasma membrane CD45 (pseudocolored green). The image was generated using a standard epifluorescence microscope. Original magnification, 20x.

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography. The antibody was conjugated to Alexa Fluor® 647 under optimum conditions, and unreacted Alexa Fluor® 647 was removed.

Application Notes

<table>
<thead>
<tr>
<th>Application</th>
<th>Routine Tested</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intracellular staining</td>
<td>(flow cytometry)</td>
</tr>
<tr>
<td>Immunofluorescence</td>
<td>Tested During Development</td>
</tr>
</tbody>
</table>
## Suggested Companion Products

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
</tr>
</thead>
<tbody>
<tr>
<td>557732</td>
<td>Alexa Fluor® 647 Mouse IgG1 κ Isotype Control</td>
<td>100 Tests</td>
<td>MOPC-21</td>
</tr>
<tr>
<td>563239</td>
<td>Transcription Factor Phospho Buffer Set</td>
<td>100 Tests</td>
<td>(none)</td>
</tr>
<tr>
<td>562725</td>
<td>Transcription Factor Buffer Set</td>
<td>25 Tests</td>
<td>(none)</td>
</tr>
<tr>
<td>554656</td>
<td>Stain Buffer (FBS)</td>
<td>500 mL</td>
<td>(none)</td>
</tr>
<tr>
<td>554657</td>
<td>Stain Buffer (BSA)</td>
<td>500 mL</td>
<td>(none)</td>
</tr>
<tr>
<td>550524</td>
<td>Retrieving A (pH 6.0)</td>
<td>1000 mL</td>
<td>(none)</td>
</tr>
<tr>
<td>563879</td>
<td>BV421 Mouse Anti-Human CD45</td>
<td>100 Tests</td>
<td>HI30</td>
</tr>
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### Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. The Alexa Fluor®, Pacific Blue™, and Cascade Blue® dye antibody conjugates in this product are sold under license from Molecular Probes, Inc. for research use only, excluding use in combination with microarrays, or as analyte specific reagents. The Alexa Fluor® dyes (except for Alexa Fluor® 430), Pacific Blue™ dye, and Cascade Blue® dye are covered by pending and issued patents.
5. Alexa Fluor® is a registered trademark of Molecular Probes, Inc., Eugene, OR.
6. Alexa Fluor® 647 fluorochrome emission is collected at the same instrument settings as for allophycocyanin (APC).
7. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.

### References


Briggs RC, Briggs JA, Ozer J, et al. The human myeloid cell nuclear differentiation antigen gene is one of at least two related interferon-inducible genes located on chromosome 1q that are expressed specifically in hematopoietic cells. *Blood.* 1994; 83(8):2153-62. (Biology)

