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# Product datasheet for AM20011RP-N

## Integrin alpha-7 / ITGA7 Mouse Monoclonal Antibody [Clone ID: 3C12]

### Product data:

| | |
|---|---|
| **Product Type:** | Primary Antibodies |
| **Clone Name:** | 3C12 |
| **Applications:** | FC |
| **Recommended Dilution:** | **Flow Cytometry:** 20 µl (Ready for Use).<br>*Positive Control:* C2C12.<br>Detailed Procedure is provided in the following**Protocols.** |
| **Reactivity:** | Mouse |
| **Host:** | Mouse |
| **Isotype:** | IgG1 |
| **Clonality:** | Monoclonal |
| **Immunogen:** | Mouse myoblasts. |
| **Specificity:** | This antibody reacts with Mouse Integrin alpha-7 on Flow Cytometry. |
| **Formulation:** | PBS containing 1% BSA as stabilizer and 0.09% Sodium Azide as preservative.<br>Label: PE<br>State: Liquid purified IgG fraction. |
| **Purification:** | Protein-A Agarose Chromatography. |
| **Conjugation:** | PE |
| **Storage:** | Store the antibody undiluted at 4 °C. |
| **Stability:** | Shelf life: one year from despatch. |
| **Database Link:** | Q61738 |



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**Background:**

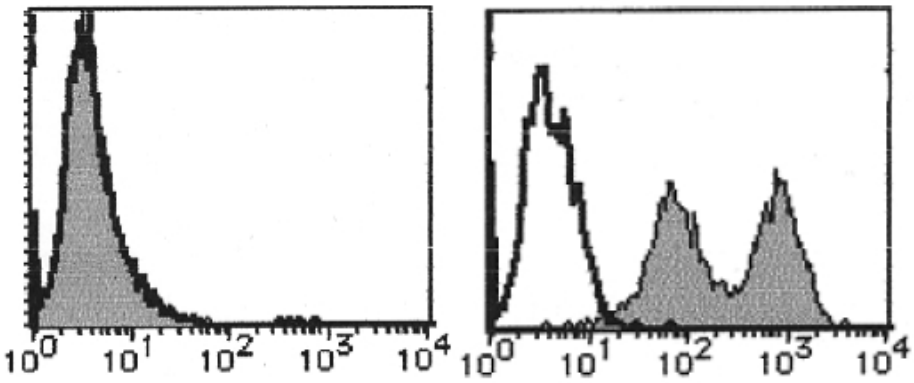
The integrin family of adhesion molecules participate in important cell-cell and cell-extracellular matrix interactions in a diverse range of biological processes. Integrins are heterodimers consisting of an alpha subunit and a beta subunit. Both alpha and beta subunits are transmembrane proteins with large extracellular domains (>100 kDa for alpha subunit and >75 kDa for beta subunit) that interact with extracellular matrix proteins and relatively small cytoplasmic domains (50 amino acids or less, except for the beta-4 subunit) that interact with cytoskeletal proteins. The adhesiveness of integrins is dynamically regulated in response to cytoplasmic signals, termed “inside-out” signaling. It has been reported that, upon ligand binding, integrins regulate many intracellular signaling pathways that involve cytoplasmic alkalization, intracellular Ca2+ fluctuation, inositol lipid metabolism, protein kinase C, MAP kinase and phosphatidyl inositol kinase. Integrin alpha-7 is a specific cellular receptor for the basement membrane protein laminin-1, as well as for the laminin isoforms-2 and -4. The alpha-7 subunit is expressed mainly in skeletal and cardiac muscle and may be involved in differentiation and migration processes during myogenesis. Absence of integrin alpha-7 results in muscular dystrophy is revealed.

**Note:**

This product was originally produced by MBL International.

Protocol: **Flow Cytometric Analysis for Floating Cells**
We usually use Fisher tubes or equivalents as reaction tubes for all step described below.
1) Wash the cells 3 times with washing buffer [PBS containing 2% fetal calf serum (FCS) and 0.1% NaN3].
2) Resuspend the cells with washing buffer (5x10e6 cells/mL).
3) Add 50 µL of the cell suspension into each tube, and centrifuge at 500 x g for 1 minute at room temperature (20~25°C). Remove supernatant by careful aspiration.
4) Add 10 µL of normal goat serum containing 1 mg/mL normal human IgG and 0.1% NaN3 to the cell pellet after tapping. Mix well and incubate for 5 minutes at room temperature.
5) Add 20 µL the PE labeled anti-mouse Integrin alpha-7 monoclonal antibody (3C12). Mix well and incubate for 30 minutes at room temperature.
6) Add 1 mL of the washing buffer followed by centrifugation at 500 x g for 1 minute at room temperature. Remove supernatant by careful aspiration.
7) Resuspend the cells with 500 µL of the washing buffer and analyze by a flow cytometer.
Positive Control for Flow Cytometry: C2C12

## Product images:




**Flow Cytometric analysis of mouse Integrin alpha-7 expression on NIH/3T3 (Left) and C2C12 (Right).** Open Histogram indicates the reaction of Isotypic Control to the cells. Shaded Histograms indicate the reaction of ITGA7 antibody to the cells.