Product Information

Material Number: 560435
Alternate Name: 40S ribosomal protein S6; Phosphoprotein NP33; RPS6; RS6
Size: 50 tests
Vol. per Test: 20 µl
Clone: N7-548
Immunogen: Phosphorylated Human ribosomal protein S6 Peptide
Isotype: Mouse (BALB/c) IgG1, κ
QC Testing: Human
Reactivity: Predicted Reactivity: Mouse, Rat

Description

Ribosomal protein S6 (~29 kDa calculated and ~32 kDa observed molecular weights) is a component of the 40S ribosomal subunit and belongs to the S6E family of ribosomal proteins. The S6 ribosomal protein plays a role in regulating the translation of RNAs and thus controlling the growth and proliferation of cells. S6 ribosomal protein phosphorylation, especially at multiple C-terminal serine residues S235, S236, S240, and S244, activates S6. The activated S6 ribosomal protein in turn upregulates the ribosomal translation of RNA species coding for other ribosomal proteins, peptide elongation factors and other proteins involved in cell cycle entry and progression. These phosphorylations are mediated by various kinases (e.g., p70S6K and PKCD) activated through cellular responses to growth factors, cytokines, tumor promoting agents, and mitogens. The S6 ribosomal protein can be dephosphorylated in growth-arrested cells.

The N7-548 monoclonal antibody specifically detects the S6 ribosomal protein phosphorylated at S235 and S236.
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.

The purified or conjugated mAb was characterized by flow cytometry (Flow) and western blot (WB) using these model systems:

<table>
<thead>
<tr>
<th>Method</th>
<th>Species</th>
<th>Cells</th>
<th>Treatment</th>
<th>Fixation</th>
<th>Perm buffer</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow</td>
<td>Human</td>
<td>PBMC</td>
<td>PMA</td>
<td>Cytofix</td>
<td>Perm I. II. or III</td>
<td>Uregulated expression</td>
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<tr>
<td>WB</td>
<td>Human</td>
<td>HEK 293</td>
<td>Serum starvation</td>
<td>no band observed</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Human</td>
<td>HEK 293</td>
<td>20% FBS</td>
<td>32-kDa band induced</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Human</td>
<td>HEK 293</td>
<td>20% FBS + S235/S236 phospho peptide</td>
<td>32-kDa band decreased</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Human</td>
<td>HEK 293</td>
<td>20% FBS + S235/S236 non-phospho peptide</td>
<td>32-kDa band not affected</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Mouse</td>
<td>NIH/3T3</td>
<td>PDGF</td>
<td>32-kDa band increased</td>
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<td></td>
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<tr>
<td></td>
<td>Human</td>
<td>PBMC</td>
<td>Untreated</td>
<td>32-kDa band</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Human</td>
<td>PBMC</td>
<td>PMA</td>
<td>32-kDa band increased</td>
<td></td>
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</tbody>
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Application Notes

Application
Intracellular staining (flow cytometry) Routinely Tested
Bioimaging Tested During Development

Suggested Companion Products

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
</tr>
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<tbody>
<tr>
<td>554655</td>
<td>Fixation Buffer</td>
<td>100 ml</td>
<td>(none)</td>
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<tr>
<td>557885</td>
<td>Perm/Wash Buffer I</td>
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<tr>
<td>558052</td>
<td>Perm Buffer II</td>
<td>125 ml</td>
<td>(none)</td>
</tr>
<tr>
<td>558050</td>
<td>Perm Buffer III</td>
<td>125 ml</td>
<td>(none)</td>
</tr>
</tbody>
</table>

Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1 x 10^6 cells in a 100-µl experimental sample (a test).
2. 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.
3. Alexa Fluor® 647 fluorochrome emission is collected at the same instrument settings as for allophycocyanin (APC).
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. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
7. FicolL-Paque is a trademark of Amersham Biosciences Limited.
8. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.

References