V450 Mouse anti-S6 (pS235/pS236)

Descriptive Information

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.

The antibody is conjugated to BD Horizon™ V450, which has been developed for use in multicolor flow cytometry experiments and is available exclusively from BD Biosciences. It is excited by the Violet laser Ex max of 406 nm and has an Em Max at 450 nm. Conjugates with BD Horizon™ V450 can be used in place of Pacific Blue™ conjugates.

Flow cytometric analysis of S6 (pS235/pS236) expression in activated human peripheral blood lymphocytes. Human peripheral blood mononuclear cells were either left untreated (dashed line histogram) or treated with Phorbol 12-Myristate 13-Acetate (PMA; Sigma-Aldrich, Cat. No. P-8139) at 50 nM for 30 minutes (solid line histogram). The cells were then fixed in BD Cytofix™ Fixation Buffer (Cat. No. 554655) at 37°C for 10 minutes, permeabilized with BD Phosflow™ Perm Buffer III (Cat. No. 558050) on ice for 30 minutes, and stained with BD Horizon™ V450 Mouse anti-S6 (pS235/pS236) antibody (Cat. No. 561457). The fluorescence histograms were derived from events with the forward and side light-scatter characteristics of intact lymphocytes. Flow cytometry was performed using a BD™ LSR II Flow Cytometer System.
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 with BD Horizon™ V450 under optimum conditions, and unreacted BD Horizon™ V450 was removed.

Application Notes

Application

Intracellular staining (flow cytometry) Routinely Tested

Suggested Companion Products

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<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
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<tbody>
<tr>
<td>558050</td>
<td>Perm Buffer III</td>
<td>125 ml</td>
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<tr>
<td>554655</td>
<td>Fixation Buffer</td>
<td>100 ml</td>
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<tr>
<td>554656</td>
<td>Stain Buffer (FBS)</td>
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Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1 × 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. BD Horizon™ V450 has a maximum absorption of 406 nm and maximum emission of 450 nm. Before staining with this reagent, please confirm that your flow cytometer is capable of exciting the fluorochrome and discriminating the resulting fluorescence.
4. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.
5. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.

References