Technical Data Sheet

Purified Mouse Anti-MAD2

Product Information

Material Number: 610679
Alternate Name: Mitotic Arrest Deficient-2
Size: 150 µg
Concentration: 250 µg/ml
Clone: 48/MAD2
Immunogen: Human MAD2 aa. 27-172
Isotype: Mouse IgG2a
Reactivity: QC Testing: Human
Tested in Development: Mouse, Rat
Target MW: 24 kDa
Storage Buffer: Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

Progression of the mammalian cell cycle is regulated by phosphorylation/dephosphorylation and synthesis/degradation of many key proteins. These events are of utmost importance at the checkpoints, or transition points, of the cell cycle. MAD2 (Mitotic Arrest Deficient) is the human homolog of a yeast and Xenopus protein that is essential for spindle assembly during mitosis. The human hsMAD2 gene encodes a protein of 205 amino acids with a predicted molecular weight of 23.5 kDa. Binding of affinity purified polyclonal antibodies to the MAD2 protein prevents mitosis of HeLa cells. This indicates that, like its invertebrate relatives, MAD2 is necessary for mitosis. Furthermore, MAD2 is localized at the kinetochore of condensed chromosomes during mitosis and cells defective in the mitotic checkpoint have reduced levels of MAD2.


Immunofluorescence staining of rabbit spleen.

Preparation and Storage

Store undiluted at -20°C.
The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.
Application Notes

<table>
<thead>
<tr>
<th>Application</th>
<th>Tested During Development</th>
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</thead>
<tbody>
<tr>
<td>Western blot</td>
<td>Routinely Tested</td>
</tr>
<tr>
<td>Immunofluorescence</td>
<td>Teste...</td>
</tr>
<tr>
<td>Immunohistochemistry</td>
<td>Teste...</td>
</tr>
<tr>
<td>Immunoprecipitation</td>
<td>Not Recommended</td>
</tr>
</tbody>
</table>

**Recommended Assay Procedure:**

*Western blot:* Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml

**Suggested Companion Products**

<table>
<thead>
<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
</tr>
</thead>
<tbody>
<tr>
<td>611451</td>
<td>Jurkat Cell Lysate</td>
<td>500 µg</td>
<td>(none)</td>
</tr>
<tr>
<td>554002</td>
<td>HRP Goat Anti-Mouse Ig</td>
<td>1.0 ml</td>
<td>(none)</td>
</tr>
<tr>
<td>554001</td>
<td>FITC Goat Anti-Mouse Ig</td>
<td>0.5 mg</td>
<td>Polyclonal</td>
</tr>
</tbody>
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**Product Notices**

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
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. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

**References**

Babu JR, Jeganathan KB, Baker DJ. Rae1 is an essential mitotic checkpoint regulator that cooperates with Bub3 to prevent chromosome missegregation. *J Biol Chem.* 2003; 160(3):341-353.(Biology: Western blot)


