Technical Data Sheet

Purified Mouse Anti-Human NPAT

Product Information
Material Number: 611344
Alternate Name: Nuclear Protein Ataxia Telangiectasia
Size: 50 µg
Concentration: 250 µg/ml
Clone: 27/NPAT
Immunogen: Human NPAT aa. 681-803
Isotype: Mouse IgG2b
Reactivity: QC Testing: Human
Target MW: 210 kDa
Storage Buffer: Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description
Cyclins regulate transitions between cell cycle phases by acting as regulatory subunits of the cyclin-dependent kinases (cdk). The temporal expression of cyclins is tightly regulated and plays a critical role in controlling the enzymatic activity of the cdk. Cyclin-dependent kinase 2 (Cdk2) is a member of a family of cdc2-related cell cycle protein kinases. Cdk2 is expressed earlier in the cell cycle than cdc2 and forms complexes with cyclins A, E, D1, and D3. It is not known if the D cyclins can form active complexes with Cdk2. Cyclin E-Cdk2 kinase is active in the G1 and S phases of the cell cycle and is important, as is Cyclin A-Cdk2, for the progression from G1 to S phase. One substrate for cyclin E-Cdk2 is a Nuclear Protein mapped to the Ataxia Telangiectasia locus, NPAT. This protein associates with cyclin E-Cdk2 and can be phosphorylated by Cdk2. NPAT protein levels peak at the G1/S boundary and overexpression of NPAT accelerates S phase entry, especially after coexpression of cyclin E-Cdk2. Thus, NPAT is a substrate of cyclin E-Cdk2 that may mediate G1 to S phase transition.

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

Western blot analysis of NPAT on a Jurkat cell lysate (Human T-cell leukemia; ATCC TIB-152). Lane 1: 1:100, lane 2: 1:200, lane 3: 1:400 dilution of the mouse anti-human NPAT antibody.

Immunofluorescence staining of A431 cells (Human epithelial carcinoma; ATCC CRL-1555).

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For country-specific contact information, visit bdbiosciences.com/how_to_order/

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Application Notes

**Application**

<table>
<thead>
<tr>
<th>Western blot</th>
<th>Routinely Tested</th>
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<tr>
<td>Immunofluorescence</td>
<td>Tested During Development</td>
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**Recommended Assay Procedure:**

*Western blot:* Please refer to [http://wwwbdbiosciencescom/pharmingen/protocols/Western_Blotting.shtml](http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml)

**Suggested Companion Products**

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<tr>
<th>Catalog Number</th>
<th>Name</th>
<th>Size</th>
<th>Clone</th>
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<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>
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**Product Notices**

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to wwwbdbiosciencescom/pharmingen/protocols for technical protocols.
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**


(Biology)