Technical Data Sheet

Purified Mouse Anti-ATP Synthase α

Product Information

Material Number: 612516

Size: 50 µg

Concentration: 250 µg/ml

Clone: 51/ATP Synthase α

Immunogen: Human ATP Synthase α aa. 113-220

Isotype: Mouse IgG2a

Reactivity: QC Testing: Human

Tested in Development: Dog, Rat, Mouse, Chicken

Target MW: 55 kDa

Storage Buffer: Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

Description

ATP synthase is a large enzyme complex that uses an electrochemical H+ or Na+ gradient to synthesize ATP from ADP and Pi, providing the organism with the ATP needed for energy. The complex consists of two major units, F0 and F1. F0 is embedded in the inner membrane of the mitochondria and, due to its hydrophobic nature, translocates protons across this membrane. F1 is the catalytic portion in the matrix region of the mitochondria and is comprised of α, β, γ, δ, and ε subunits at a 3:3:1:1:1 ratio. The α subunit is a ubiquitous protein that is highly conserved among species. It has an adenine specific binding site that binds both ATP and ADP. There are two glycine rich regions in the sequence, the A domain and B domain, that are thought to be part of the nucleotide binding domain. It has been demonstrated that the N-terminus of the α subunit is necessary for the correct functional and structural connection of F0 to F1. Thus, the α subunit is an essential component of the ATP synthase complex and plays a role in properly orienting the F0 and F1 units.


Immunofluorescent staining of Cos7 cells.

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Store undiluted at -20°C.

Application Notes

Application

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<tr>
<th>Application</th>
<th>Western blot</th>
<th>Immunofluorescence</th>
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<tbody>
<tr>
<td>Routinely Tested</td>
<td>Tested During Development</td>
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Recommended Assay Procedure:
Western blot: Please refer to http://www.bdbiosciences.com/pharmingen/protocols/Western_Blotting.shtml.

Suggested Companion Products

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<thead>
<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.
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