Technical Data Sheet

Purified Mouse Anti- PCMT-I/II

**Product Information**

Material Number: 610772
Alternate Name: Protein Carboxyl Methyl Transferase; PIMT
Size: 50 µg
Concentration: 250 µg/ml
Clone: 4/PCMT-II
Immunogen: Human PCMT-II aa. 10-211
Isotype: Mouse IgG1
Reactivity: QC Testing: Human
Tested in Development: Dog
Target MW: 25 kDa
Storage Buffer: Aqueous buffered solution containing BSA, glycerol, and ≤0.09% sodium azide.

**Description**

PCMT-II (Protein Carboxyl Methyl Transferase), or L-isoaspartate (D-aspartate) O-methyltransferase, is a cytosolic enzyme that is expressed in all tissues as well as in bacteria. Interestingly, PCMT-II is highly expressed in the brain. It recognizes damaged proteins that result from deamidation, isomerization, and racemization reactions. These proteins contain L-isoaspartyl and D-aspartyl residues and can have abnormal configurations that result in anomalous or loss of function. PCMT-II catalyzes the first step of the conversion of these unusual residues to normal L-aspartyl residues. This mechanism prevents the accumulation of aberrant proteins in aging cells. Pcmt-1 knock-out mice display growth retardation and a seizure disorder that results in death at an average age of 42 days. Thus, PCMT-II is necessary for growth and nervous system function. The immunogen region from human PCMT-II used to generate this antibody has been reported to be identical to the region in PCMT-I.

**Preparation and Storage**

Store undiluted at -20° C.

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


**Immunofluorescence staining of human intestinal smooth muscle cells (HISM).**
Application Notes

Application

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

Recommended Assay Procedure:

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

Suggested Companion Products

<table>
<thead>
<tr>
<th>Catalog Number</th>
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<th>Clone</th>
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<tbody>
<tr>
<td>611447</td>
<td>A431 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>
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<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


Kim E, Lowenson JD, MacLaren DC, Clarke S, Young SG. Deficiency of a protein-repair enzyme results in the accumulation of altered proteins, retardation of growth, and fatal seizures in mice. *Proc Natl Acad Sci U S A.* 1997; 94(12):6132-6137. (Biology)

