**Mouse anti-Kunitz Protease Inhibitor (KPI)**

**FORM**
This monoclonal antibody is supplied as a 200 µl aliquot at a concentration of 0.5 mg/ml in PBS, pH 7.4, containing 0.1% sodium azide. This antibody is highly purified from mouse ascites by protein A chromatography.

**CLONE:** KPI4.1  
**ISOTYPE:** Mouse IgG1

**IMMUNOGEN**
Recombinant KPI domain.

**SPECIFICITY**
This antibody is specific for the Kunitz protease inhibitor (KPI) domain of the beta-Amyloid protein precursor (APP).

**REACTIVITY**
This antibody reacts with human APP. Reactivity with other species has not been confirmed. This antibody can also be used as a capture antibody for KPI containing forms of APP in a sandwich ELISA. It can also inhibit the proteinase inhibitory function of APP.

<table>
<thead>
<tr>
<th>Sample</th>
<th>ELISA</th>
<th>Immunohistochemistry (frozen)</th>
<th>Western Blotting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human</td>
<td>+++</td>
<td>++</td>
<td>+++</td>
</tr>
<tr>
<td>Immunogen</td>
<td>+++</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

(Excellent ++++, Good++, Poor +, No reactivity 0, Not applicable NA)

**USAGE**
Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

- **ELISA:** 1-5 µg/ml
- **Immunohistochemistry:** 1 µg/ml
- **Western Blotting:** 1-5 µg/ml

**STORAGE**
Store at 2-8°C for up to one month. Store at –20°C for long term storage. Avoid repeated freezing and thawing.

(continuation)
BACKGROUND
The gene encoding the beta-Amyloid protein precursor (APP) produces at least four major transcripts, in which three of the four transcripts contain an alternatively-spliced exon encoding a Kunitz protease inhibitor (KPI) domain. The beta-Amyloid protein precursor with Kunitz-type protease inhibitor (APP-KPI) levels in cerebrospinal fluid and APP-KPI mRNA in skin fibroblasts may be useful for early diagnosis of Alzheimer’s Disease (AD). The precursor of Alzheimer’s deposition protein contains a Kunitz-type trypsin inhibitor. KPI-containing forms of APP are present in dystrophic neurites of senile plaques, and normally in neurons, neuronal processes, and in the vascular compartment of the brain. APP-KPI is in position to be intimately associated with beta/A4 deposition in the neurophil, in plaques and in amyloid angiopathy. In Down Syndrome (DS) with Alzheimer type dementia, KPI immunoreactivity in the arteries was reduced, but a gross granular reactivity was noted in neurons and glial cells. APP appears to play a role in neuronal development and its earlier reappearance in adult DS patients is associated with the regeneration process related to aging.

REFERENCES

RELATED PRODUCTS

<table>
<thead>
<tr>
<th>Product</th>
<th>Clone/PAD*</th>
<th>Cat. No.</th>
</tr>
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<tbody>
<tr>
<td>Rb x Amyloid β-Precursor Protein</td>
<td>CT695</td>
<td>51-2700</td>
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<tr>
<td>Ms x Amyloid β-Precursor Protein</td>
<td>LN27</td>
<td>13-0200</td>
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<td>Ms x Tau (C-term)</td>
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<td>13-6400</td>
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<td>Ms x Tau</td>
<td>T14</td>
<td>13-1400</td>
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<tr>
<td>Ms x Neurofilaments</td>
<td>many</td>
<td>please inquire</td>
</tr>
</tbody>
</table>

Protein A

re-Peptide

Protein A

rec-Protein G

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