Anti-Acetylcholinesterase (human brain, bovine brain, AChE)

**Mouse monoclonal antibody**

**PRODUCT NO.** HYB 190-01

**PRESENTATION**
- Preparation: Protein-A/G purified
- Content: Available in 200 µL and 1 mL size. 1 mg/mL +/- 15%. See Certificate of Analysis for details.
- Solvent: 0.01 M phosphate buffer, pH 7.4, containing 0.5 M NaCl and 15 mM sodium azide
- Storage: 4-8°C without exposure to light. No precautions necessary during handling.

**ANTIGEN**
Acetylcholinesterase (ACHE, EC.3.1.1.7.) is an enzyme located in the postsynaptic membrane and in the muscle endplates, where it hydrolyses the neurotransmitter acetylcholin. AChE from brain is a tetramer (G4-AChE) with a molecular mass of 320 kDa, AChE from erythrocytes is a dimer (G2-AChE) with a molecular mass of 170 kDa.

Detection of higher levels of AChE in amniotic fluid can indicate fetal malformations such as neural tube defects.

**IMMUNOGEN**
C-terminal 10 residues of brain acetylcholinesterase (human and bovine), absent from the erythrocyte enzyme.

**SPECIFICITY**
HYB 190-01 is specific for brain AChE and does not recognize AChE from erythrocytes. The antibody can thus distinguish between mammalian brain AChE and erythrocyte AChE. Weak cross-reactivity with Torpedo marmorata AChE but none with AChE from electric eel or human BChE.

**EPITOPE SPECIFICITY**
C-terminal 10 residues (aa 574-583) of brain acetylcholinesterase (DS-AChE and SS-AChE) (1).

**REACTIVITY**
Can be used in ELISA on amniotic fluid for the diagnosis of neural tube defects. HYB 190-01 is well suited as catching antibody (on an anti-mouse IgG coat) in enzyme antigen immunoassay (EAIA), where the antigen (AChE) is captured and used directly as substrate for acetylthiocholiniodide (Ellmann’s reaction) (1,2).

In Western blotting and dot blotting HYB 190-01 reacts with native and denatured human and bovine, detergent soluble and salt-soluble AChE. No cross-reactivity is seen with erythrocyte AChE.

In Western blotting a dilution guideline of 1/75 has proved successful (1).

**CULTURE MEDIUM** RPMI 1640 with 10% fetal calf serum

**FUSION PARTNER** X63-Ag8.653

**IMMUNIZATION** Female CF1 x BALB/c mice immunized by intraperitoneal injection

**APPLICATION**

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<tr>
<th>Method</th>
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<tr>
<td>ELISA</td>
<td>Yes</td>
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<tr>
<td>Immunoblotting</td>
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<tr>
<td>Immunohistochemistry</td>
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**REFERENCES**

**CONDITIONS**

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