**DESCRIPTION**

**Species Reactivity** Human/Mouse

**Specificity** Detects human and mouse BACE-1 in direct ELISAs and human BACE-1 in Western blots. In Western blots, no cross-reactivity with recombinant human (rh) BACE-2, recombinant mouse (rm) BACE-2, rhADAM8, rmADAM9, rmADAM10, rhADAM15, or rhTACE is observed.

**Source** Monoclonal Mouse IgG, Clone # 137612

**Purification** Protein A or G purified from hybridoma culture supernatant

**Immunogen** Mouse myeloma cell line NS0-derived recombinant human BACE-1 Thr22-Tyr460

**Accession #** P56817

**Formulation** Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

*Small pack size (SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS.

**APPLICATIONS**

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

<table>
<thead>
<tr>
<th>Sample</th>
<th>Western Blot</th>
<th>Immunohistochemistry</th>
<th>Intracellular Staining by Flow Cytometry</th>
<th>CyTOF-ready</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recommended Concentration</strong></td>
<td>2 μg/mL</td>
<td>8-25 μg/mL</td>
<td>2.5 μg/10^6 cells</td>
<td>Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.</td>
</tr>
<tr>
<td><strong>Sample</strong></td>
<td>See Below</td>
<td>Immersion fixed paraffin-embedded sections of human Alzheimer's disease brain</td>
<td>Jurkat human acute T cell leukemia cell line fixed with paraformaldehyde and permeabilized with saponin</td>
<td></td>
</tr>
</tbody>
</table>

**DATA**

**Western Blot**

Detection of Human BACE-1 by Western Blot. Western blot shows lysates of human brain (Alzheimer's disease hippocampus) tissue. PVDF Membrane was probed with 2 μg/ml of Mouse Anti-Human/Mouse BACE-1 Ectodomain Monoclonal Antibody (Catalog # MAB931) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). Specific bands were detected for BACE-1 at approximately 60 and 70 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

**PREPARATION AND STORAGE**

**Reconstitution** Reconstitute at 0.5 mg/mL in sterile PBS.

**Shipping** The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

*Small pack size (SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C.

**Stability & Storage** Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 6 months, -20 to -70 °C under sterile conditions after reconstitution.

Rev. 2/7/2018 Page 1 of 2
BACE-1 (beta-site APP cleaving enzyme-1) is an aspartic protease and an integral membrane protein (1, 2). It is the major β secretase, and together with the γ secretase, is responsible for generating the amyloid β peptide (Aβ) from the amyloid precursor protein (APP) (3, 4). Because Aβ is a major component of amyloid plaques, BACE-1 has been implicated in the onset and/or progression of Alzheimer’s disease. High levels of BACE-1 activity are sufficient to elicit neurodegeneration and neurological decline in vivo, indicating that inhibiting BACE-1 may block not only Aβ-dependent but also Aβ-independent pathogenic mechanisms (5). In addition to APP, BACE-1 also cleaves APP-like proteins 1 and 2, the cell adhesion protein P-selectin glycoprotein ligand-1 and β-galactoside α2,6-sialyltransferase, implying that BACE-1 may have additional functions involving the ectodomain shedding of membrane proteins (6-8).

References: