

Product Specification Sheet

**Monoclonal Anti-Human Presenilin-1 Antibodies**

**Cat. #** PS12-M

Monoclonal Rat Anti-Human Presenilin-1, Ab # 2,

**SIZE:** 100ul

**FORM:** Soln

Lyophilized

Alzheimer's Disease (AD) is a neurodegenerative disorder characterized by progressive loss of memory and cognition in the elderly. A number of genes have been linked in the initiation and development of AD. One of the most important and initial step involves proteolytic cleavage of amyloid precursor protein (APP, chromosome 21) releasing short 40, 42 & 43 aa peptides (b amyloid 1-40, 1-42, and 1-43). Polymerization of b-amyloid (Ab) and subsequent neuronal deposit (amyloid) leads to the degeneration of neurons involved in memory and cognition. Mutations in the APP gene cause some forms of familial AD (FAD) by releasing an increased amounts of b-amyloid. The AD Ab deposits also contain anti-chymotrypsin (ACT), and Apolipoprotein (Apo-E) that may promote Ab polymerization.

An early onset of FAD has also been linked to some 30 mutations in two related genes, **Presenilins-1** (PS-1 on chromosome 14; 467 aa) and **Presenilins-2** (PS-2 on chromosome 1; 448 aa). Presenilins may contain 7-9 transmembrane domains. Presenilins are members of an evolutionary conserved gene family. PS1 and PS2 are 67% identical, and show significant homology to *C. elegans* genes sel-12 (~50 homology) and spe-4 (~20% identity). Both PS1 and PS2 genes are expressed in several human and rat tissues. In the CNS, the two genes are predominately expressed in neurons. Have PS-1/2 have been co-localized in subcellular sites involved in cell cycle regulation and mitosis (the nuclear membrane, interphase kinetochore, and centrosome).

**Source of Antigen and Antibodies**

<b>Antigen</b>	GST-human PS1 fusion protein (21-80 aa).
<b>Ab Host/type</b>	Rat, Monoclonal
<b>Ab Format</b>	Antiserum/ Ascites ( <b>cat# PS12-M</b> )

**Form & Storage of Antibodies/Peptide Control**

**Antiserum/ Ascites (unpurified, undiluted)**

100 ul/vial solution contains 0.05% sodium azide	50 ul/vial lyophilized powder
--	----------------------------------

**Reconstitute powder** in the original vol. of water

**Storage**

**Short-term:** unopened, undiluted vials for less than a week at 4oC.

**Long-term:** at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

**Stability:** 6-12 months at -20oC or below.

**Shipping:** 4oC for solutions and room temp for powder.

**Recommended Usage**

**Western Blotting** (1:1K-5K for neat serum using Chemiluminescence technique).

**ELISA** (1:10K-1:100K; using 50-100 ng of control peptide/well).

**Immunoprecipitations:** We recommend 5-10 ul neat per 100 ug of tissue (1)..

**Histochemistry & Immunofluorescence:** We recommend a dilution of 1:200 to 1:500).

**Specificity & Cross-reactivity**

Antibody reacts with PS1 from mouse, human, and rat. Actual species cross-reactivity of antibodies in various species has not been studied.

**General References:**

Moussaoui, S. (1996) *FEBS Lett.*383, 219-222; Blanchard, V. et al. (1997) *Brain Res.*, 758, 209-217; Li, J., et al. (1997) *Cell*, 90, 917-927.

\*This product is for *in vitro* research use only.

**Related material available from ADI:**

Antibodies against ERAB; Synucleins, Beta-Amyloid; .

**Western Blot recycling kit** (Use the same blot to probe with multiple antibodies SYN, CLO11, etc.) **recycle blot at room temp in 5-10 min**; No mercaptoethanol or heating required).

PS12 rev. 40204S