

**Human  $\beta$ -Amyloid 1-40 Antibody (4A4F2), mAb, Mouse****Cat. No.:** A01566**Size:** 100  $\mu$ g**Synonyms:** Human  $\beta$ -Amyloid 1-40 Antibody (4A4F2), mAb, Mouse**Description:**

A number of mutations, identified in the gene encoding the  $\beta$ -amyloid precursor protein ( $\beta$ APP), have been linked to early-onset Familial Alzheimer's Disease.  $\beta$ APP is cleaved sequentially by the proteolytic enzymes  $\beta$ -secretase and  $\gamma$ -secretase to produce  $\beta$ -amyloid ( $A\beta$ ) peptides with the  $A\beta$ 1-42(43) and the  $A\beta$ 1-40 forms being the most prevalent. Secreted  $A\beta$  peptides can bind to scavenger receptors and the receptor for advanced glycation end-products.  $A\beta$  peptides are degraded either via a reuptake mechanism followed by endosomal degradation or by an extracellular insulin-degrading enzyme. Extracellular accumulation of  $A\beta$  leads to formation of aggregates, fibrils and eventually amyloid deposits called neuritic plaques, a hallmark of Alzheimer's disease.  $\beta$ -amyloid antibodies and peptides have been developed as tools for elucidating the biology of Alzheimer's disease. **GenScript Human  $\beta$ -Amyloid 1-40 Antibody (4A4F2), mAb, Mouse** is produced from the hybridoma resulting from fusion of Sp2/0 myeloma and lymphocytes obtained from mouse immunized with a synthetic peptide corresponding to amino acids 32-40 of  $\beta$ -Amyloid C-terminus conjugated to KLH (Swiss Prot: P05067).

**Immunogen:** synthetic peptide corresponding to amino acids 32-40 of  $\beta$ -Amyloid C-terminus conjugated to KLH (Swiss Prot: P05067)**Host:** Mouse**Conjugation:** Unconjugated**Fusion Partner:**

Spleen cells were fused with SP2/0-Ag14 mouse myeloma cells.

**Formulation:****Example**

0.5 mg/ml, lyophilized with PBS, pH 7.4, containing 0.02% sodium azide.

**Clone:** 4A4F2**Ig Subclass:** IgG2b, k**Specificity:** **GenScript Human  $\beta$ -Amyloid 1-40 Antibody (4A4F2), mAb, Mouse** detects human  $\beta$ -Amyloid 1-40 and does not cross-react with human  $\beta$ -Amyloid 1-42.**Purification:** Protein A affinity column**Applications:**

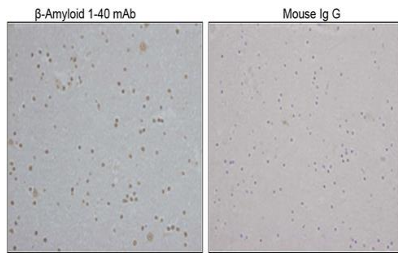
Working concentrations for specific applications should be determined by the investigator. The appropriate concentrations may be affected by secondary antibody affinity, antigen concentration, the sensitivity of the method of detection, temperature, the length of the incubations, and other factors. The 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:** 0.05-0.2  $\mu$ g/ml**Dot blot:** 0.1-1.0  $\mu$ g/ml**IHC:** 1.0-5.0  $\mu$ g/ml**Other applications:** user-optimized**Species Reactivity:** Human. Reactivity to other species is not tested yet.**Reconstitution:**

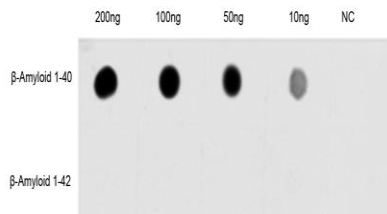
Reconstitute lyophilized powder with deionized water (or equivalent) to antibody concentration of 0.5 mg/ml.

**Storage:**

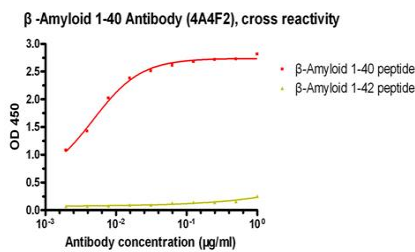
**GenScript Human  $\beta$ -Amyloid 1-40 Antibody (4A4F2), mAb, Mouse** should be stored lyophilized until use. It remains stable in lyophilized form if stored at  $-20^{\circ}\text{C}$  or below. The reconstituted antibody can be stored for 2-3 weeks at  $2-8^{\circ}\text{C}$  or for up to 12 months at  $-20^{\circ}\text{C}$  or below. Avoid repeated freezing and thawing cycles.



Immunohistochemistry analysis of human brain tissue slide (Paraffin embedded) using Human  $\beta$ -Amyloid 1-40 Antibody (4A4F2), mAb, Mouse (GenScript A01566) and Mouse IgG Control (Whole Molecule), Purified (GenScript, A01007).



Dot blot analysis of human  $\beta$ -Amyloid 1-40 peptide and human  $\beta$ -Amyloid 1-42 peptide with Human  $\beta$ -Amyloid 1-40 Antibody (4A4F2), mAb, Mouse (GenScript, A01566).



Cross-reactivity of Human  $\beta$ -Amyloid 1-40 Antibody (4A4F2), mAb, Mouse by Indirect ELISA: **General conditions:** 1. Microplate was incubated with human  $\beta$ -Amyloid 32-40, human  $\beta$ -Amyloid 36-42, human  $\beta$ -Amyloid 1-40, or human  $\beta$ -Amyloid 1-42 respectively, followed by 3 washing cycles. 2. Incubation with Human  $\beta$ -Amyloid 1-40 Antibody (4A4F2), mAb, Mouse followed by 3 washing cycles. 3. Incubation with goat anti-mouse IgG conjugated to peroxidase, followed by 3 washing cycles. 4. Colorimetric determination of bound peroxidase activity.