



## Anti-Amyloid $\beta$ (1-40) , Rabbit-Polyclonal Antibody

**Catalog No.** GB-10356      **Quantity:** 100 $\mu$ g      **Applications:** Dot blot, Western blot  
**Antigen species:** Amyloid  $\beta$  (1-40)      **Reactivity:** Amyloid  $\beta$  (1-40)  
**Host species:** Rabbit      **Form:** Antigen affinity purified antibody

### Target description

The amyloid beta (1-40) peptide (A beta) is the main component of amyloid deposits found in the brain of patients afflicted with Alzheimer's disease. Brain to blood transport is believed to be a major determinant of the amount of amyloid beta protein (AbetaP) found in brain. Chronic brain hypoperfusion (CBH) initiates spatial memory loss in aging rats thus mimicking human mild cognitive impairment (MCI) and also increases A beta 1-40 in the hippocampus. The memory and amyloid changes are preceded by NO upregulation in the hippocampus. These preliminary findings may be important in understanding, at least in part, the molecular mechanisms that precede memory impairment during chronic brain ischemia and as such, the pre-clinical stage leading to Alzheimer's disease.

### Antigen

This polyclonal antibody was raised by immunizing rabbit with a synthetic peptide containing 1-40 amino acids of amyloid.

### Application

The antibody specificity was assayed by dot blot analysis with the synthetic Amyloid (1-40) peptide antigen and Western blot analysis. The antibody titer is more than 10K for Dot blot and 1,000X for Western blot analysis (data not shown). It has not been tested in the other applications. However, for the first testing, we recommend 1/5,000 dilution for ELISA, 1/1,000 dilution for Western blot analysis (WB) of recombinant protein, 1/400 dilution for tissue extracts or cell lysates, 1/100 dilution for immunohistochemistry (IHC) staining on frozen cryosections, 1/50 dilution for IHC staining on paraffin embedded sections.

### Related Products

1. Anti-Amyloid  $\beta$  (37-42), rabbit pAb (GB-10370)



### Dot Blot Protocol

Antigen is coated on NC membrane at 1 $\mu$ g, 0.1 $\mu$ g and 0.01 $\mu$ g per dot from top to bottom direction. Add blocking buffer (3%BSA/1XPBS) after the dot is air-dry for 30 minutes and then wash the membrane with PBST buffer. Antiserum GB-10356 is diluted in 1000 folds. Incubate antibody for 1hr at room temperature. Wash unbound antibodies and add anti-rabbit IgG-HRP conjugate. Wash the membrane with PBST buffer and add substrate to develop color for 10 min. Amount of color is directly proportional to the amount of antibodies. Antibody is positive at visible signal.

### Storage

It is supplied as antigen affinity purified antibody in lyophilized powder. Redissolve the powder with 100 microliter sterile water will restore to the original concentration 1mg/ml (1 $\times$ PBS). Store at 4 $^{\circ}$ C for short-term application. For long-term storage, aliquot and store at -20 $^{\circ}$ C.

### References

1. Mal'tseva, E.A., Bretsesinskii, G., Interaction of amyloid beta-(1-40) peptide with model membranes. *Biofizika*. 49(1):38-46, 2004.
2. de la Torre, J.C., Pappas, B.A., Prevot, V., Emmerling, M.R., Mantione, K., Fortin, T., Watson, M.D., Stefano, G.B. Hippocampal nitric oxide upregulation precedes memory loss and A beta 1-40 accumulation after chronic brain hypoperfusion in rats. *Neurol Res*. 25(6):635-41, 2003.