

Rev05 DATASHEET

Update: Nov,03,2023

# Human β-Amyloid 1-42 Antibody (2C2G5), mAb, Mouse

Cat. No.: A01567

### **Overview**

| Specificity         | GenScript Human $\beta$ -Amyloid 1-42 Antibody (2C2G5), mAb, Mouse detects human $\beta$ -Amyloid 1-42 and does not cross-react with human $\beta$ -Amyloid 1-40. |
|---------------------|---|
| <b>Host Species</b> | Mouse   |
| Immunogen           | A synthetic peptide corresponding to amino acids 1-42 of human $\beta\text{-amyloid}$ conjugated to KLH   |
| Species Reactivity  | Human. Reactivity to other species is not tested yet.   |
| Conjugate           | Unconjugated  |

# **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.

| Application                | Recommended Usage |
|----------------------------|-------------------|
| ELISA                      | 0.05-0.2 μg/ml    |
| Dot blot                   | 0.1-1.0 μg/ml     |
| Immunohistochemistry (IHC) | 1.0-5.0 μg/ml     |

# **Properties**

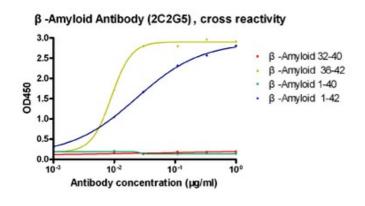
| Form           | Lyophilized  |
|----------------|--|
| Storage Buffer | lyophilized with PBS, pH 7.4, containing 0.02% sodium azide.   |
| Reconstitution | Reconstitute the lyophilized powder with deionized water (or equivalent) to an final concentration of 0.5 mg/mL. |

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| Storage Instructions | The lyophilized product remains stable for up to 1 year at -20 °C from the date of receipt. Upon reconstitution, ti can be stored for 2-3 weeks at 2-8 °C or for up to 12 months at -20 °C or below. Avoid repeated freezing and thawing cycles. |
|----------------------|--|
| Purification         | Affinity chromatography  |
| Isotype              | Mouse IgG  |
| Clonality            | Monoclonal   |
| Clone ID             | 2C2G5  |

## **Examples**

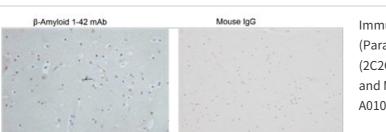


Cross-reactivity of Human  $\beta$ -Amyloid 1-42 Antibody (2C2G5), mAb, Mouse by Indirect ELISA.

#### **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 1-42 Antibody (2C2G5), mAb, Mouse followed by 3 washing cycles.
- 3. Incubation with goat anti-mouse lgG conjugated to peroxidase, followed by 3 washing cycles.
- 4. Colorimetric determination of bound peroxidase activity.

Dot blot analysis of human β-Amyloid 1-40 and human β-Amyloid 1-42 Antibody (2C2G5), mAb, Mouse (GenScript A01567).



Immunohistochemistry analysis of human brain tissue slide (Paraffin embedded) using Human  $\beta$ -Amyloid 1-42 Antibody (2C2G5), mAb, Mouse (GenScript A01567) and Mouse IgG Control (Whole Molecule), Purified (GenScript, A01007).

# **Background**



**Target Background :** A number of mutations, identified in the gene encoding the  $\beta$ -amyloid precursor protein ( $\beta$ APP), have been linked to early-onset Familial Alzheimers 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 Alzheimers disease. GenScript Human  $\beta$ -Amyloid 1-42 Antibody (2C2G5), mAb, Mouse is produced from the hybridoma resulting from fusion of Sp2/0 myeloma and B-lymphocytes obtained from mouse immunized with a synthetic peptide corresponding to amino acids 36-42 of human  $\beta$ -Amyloid conjugated to KLH (Swiss Prot: P05067).

**Synonyms**: β-amyloid Antibody (1-42), mAb, Mouse;

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