

## InVivoSIM anti-human amyloid beta (Donanemab Biosimilar)

**Attention:** Use of this product constitutes an agreement to Bio X Cell's Terms and Conditions which are included with this product in print and can also be found at <https://bioxcell.com/terms-and-conditions>.

### Lot Specific Information

**Lot Number:** Lot Specific\*  
**Volume:** Lot Specific\*  
**Concentration:** Lot Specific\* (generally 4 to 11 mg/ml) \*  
**Total Protein:** Lot Specific\*

\*This information will be noted on the certificate of analysis that ships with this product.

### Product Information

**Catalog Number:** SIM0048  
**Clone:** Donanemab  
**Isotype:** Human IgG1,  $\kappa$   
**Recommended Isotype Control(s):** RecombiMAb human IgG1 isotype control, anti-hen egg lysozyme  
**Recommended Dilution Buffer:** InVivoPure pH 7.0 Dilution Buffer  
**Immunogen:** Human APP  
**Reported Applications:** *in vivo* functional assays  
*in vitro* functional assays  
ELISA  
Western blot  
**Formulation:** PBS, pH 7.0  
Contains no stabilizers or preservatives  
**Endotoxin:**  $\leq 0.5$  EU/mg ( $\leq 0.0005$  EU/ $\mu$ g)  
Determined by LAL gel clotting assay  
**Purity:**  $\geq 95\%$   
Determined by SDS-PAGE  
**Sterility:** 0.2  $\mu$ m filtration  
**Production:** Purified from cell culture supernatant in an animal-free facility  
**Aggregation:**  $< 5\%$   
Determined by SEC  
**RRID:**  
**Molecular Weight:** 150 kDa

### Murine Pathogen Test Results

Mouse Norovirus: Negative, Mouse Parvovirus: Negative, Mouse Minute Virus: Negative, Mouse Hepatitis Virus: Negative, Reovirus Screen: Negative, Lymphocytic Choriomeningitis virus: Negative, Lactate Dehydrogenase-Elevating Virus: Negative, Mouse Rotavirus: Negative, Theiler's Murine Encephalomyelitis: Negative, Ectromelia/Mousepox Virus: Negative, Hantavirus: Negative, Polyoma Virus: Negative, Mouse Adenovirus: Negative, Sendai Virus: Negative, Mycoplasma Pulmonis: Negative, Pneumonia Virus of Mice: Negative, Mouse Cytomegalovirus: Negative, K Virus: Negative

### Description

This non-therapeutic biosimilar antibody uses the same variable regions as the therapeutic antibody Donanemab, making it ideal for research use. Donanemab is a humanized IgG1 $\kappa$  anti-human APP antibody, and it specifically reacts with A $\beta$ 42 (A $\beta$ 42), a pyroglutamate form of A $\beta$  that is aggregated in amyloid plaques during the pathogenesis of Alzheimer's disease (AD). A $\beta$ 42 results from an aberrant processing of amyloid- $\beta$  protein precursor (APP or A $\beta$ PP). The initial cleavage of APP is caused by either  $\alpha$ -secretase or  $\beta$ -secretase (or BACE1). sAPP $\alpha$  and the  $\alpha$ -C-terminal fragment ( $\alpha$ -CTF or APP-C83) are produced by  $\alpha$ -secretase cleavage of APP, whereas sAPP $\beta$  and the  $\beta$ -C-terminal fragment ( $\beta$ -CTF or APP-C99) are produced by  $\beta$ -secretase cleavage.  $\gamma$ -secretase further cleaves C83 and C99, yielding the P3 peptide and A $\beta$ , respectively.

Depending on the location of the  $\gamma$ -secretase cleavage, A $\beta$  can have a length of 37-43 amino acids in its peptide sequence. The two main A $\beta$  species are A $\beta$ 42 and A $\beta$ 40. In early AD pathology, A $\beta$  species play a critical role by seeding toxic oligomeric species with A $\beta$ 42 being more preferentially depositing in amyloid plaques than A $\beta$ 40. Donanemab specifically recognizes A $\beta$  p3-42 (A $\beta$ 42) and it is reported to impede the progression of AD by clearing plaques through microglial-mediated phagocytosis in mice without causing microhemorrhages. Donanemab biosimilar antibodies are commonly used for in vitro and in vivo studies involving Alzheimer's disease and Down syndrome experimental models.

## Storage

Store at the stock concentration at 4°C . **Do not freeze.**

It is not uncommon for a floccule or precipitate to appear during storage. The floccule is typically buffer salts precipitating out of solution or a small bit of protein aggregation. For information on how to remove floccules or precipitates see our FAQ's at <https://bioxcell.com/faqs>.

## Protocol Information

Since applications vary, each investigator should use the application references as a guide to help estimate the appropriate dose or concentration. The dose or concentration can be further optimized experimentally in a dose response or titration experiment.

## Application References

For a complete list of references, visit [https://bioxcell.com/sim0048?bxcs=9k1b3a#tab\\_references](https://bioxcell.com/sim0048?bxcs=9k1b3a#tab_references) or scan the QR code below.



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*Not for resale.*

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