

DESCRIPTION

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|-------------------------------------|--|---------|---|
| Source | Mouse myeloma cell line, NS0-derived human APP695 protein | | |
| | Human Amyloid-beta A4 (Isoform APP695) (Leu18-Lys612) Accession # P05067-4 | DIEGRMD | Human IgG ₁ (Pro100-Lys330) |
| | N-terminus | | C-terminus |
| N-terminal Sequence Analysis | Leu18 | | |
| Structure / Form | Disulfide-linked homodimer | | |
| Predicted Molecular Mass | 94 kDa | | |

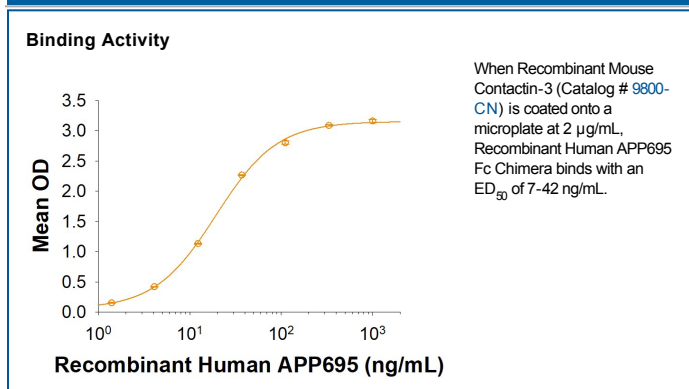
SPECIFICATIONS

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|------------------------|---|
| SDS-PAGE | 111-133 kDa, reducing conditions |
| Activity | Measured by its binding ability in a functional ELISA. When Recombinant Mouse Contactin-3 (Catalog # 9800-CN) is coated at 2 µg/mL, 100 µL/well, Recombinant Human APP695 Fc Chimera binds with an ED ₅₀ of 7-42 ng/mL. |
| Endotoxin Level | <0.10 EU per 1 µg of the protein by the LAL method. |
| Purity | >85%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining. |
| Formulation | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. |

PREPARATION AND STORAGE

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| Reconstitution | Reconstitute at 500 µg/mL in PBS. |
| Shipping | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| Stability & Storage | <ul style="list-style-type: none"> ● 12 months from date of receipt, ≤ -20 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 3 months, ≤ -20 °C under sterile conditions after reconstitution. |

DATA



BACKGROUND

Amyloid precursor protein (APP) is a type I membrane protein with several isoforms due to alternative splicing. Of the three major splice isoforms of APP (APP695, APP751, and APP770) APP695 is the predominant neuronal form from which Amyloid beta peptide and transcriptionally-active cleaved intracellular domain of APP (AICD) are preferentially generated by selective processing through the amyloidogenic pathway (1). Human APP695 consists of a 17 amino acid (aa) signal sequence, a 607 aa extracellular domain (ECD), a 24 aa transmembrane domain, and a 47 aa cytoplasmic domain. Within the ECD, human APP695 shares 97% aa sequence identity with mouse and rat APP695. Amyloid beta is a major molecule implicated in pathogenesis of Alzheimer's disease (AD) and related dementias (2). AICD regulates expression by direct promoter binding of multiple genes, including APP itself, the beta-secretase, BACE-1 and the Amyloid beta-degrading enzyme, Neprilysin (3, 1). As such, APP695 plays an important role in brain development, learning and memory, synaptic plasticity, and neurodegeneration including AD (4).

References:

1. Nalivaeva, N.N. and Turner A. J. (2013) FEBS Lett. **587**:2046.
2. Haass, C. (2004) EMBO J. **23**:483.
3. Passer, B. *et al.* (2000) J. Alzheimers Dis. **2**:289.
4. Benilova, I. *et al.* (2012) Nat. Neurosci. **15**:349.