

Datasheet for ABIN7317787

Abeta 1-40 Protein (GST tag,His tag)[Go to Product page](#)

Overview

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|-------------------------------|---|
| Quantity: | 100 µg |
| Target: | Abeta 1-40 |
| Origin: | Human |
| Source: | Escherichia coli (E. coli) |
| Protein Type: | Recombinant |
| Biological Activity: | Active |
| Purification tag / Conjugate: | This Abeta 1-40 protein is labelled with GST tag,His tag. |

Product Details

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| Purpose: | Recombinant Human Beta-amyloid 40/Beta-APP40 Protein (His&GST Tag)(Active) |
| Sequence: | Asp 672-Val 711 |
| Characteristics: | A DNA sequence encoding the amino acids (Asp 672-Val 711) of human Amyloid beta A4 protein (APP770) (P05067-1), corresponding to the Beta-amyloid protein 40, was fused with the N-terminal polyhistidine-tagged GST tag at the N-terminus. |
| Purity: | > 92 % as determined by reducing SDS-PAGE. |
| Endotoxin Level: | Please contact us for more information. |
| Biological Activity Comment: | Measured by its ability to bind biotinylated recombinant human AGER in a functional ELISA. |

Target Details

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| Target: | Abeta 1-40 |
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Target Details

Alternative Name: Beta-amyloid 40 ([Abeta 1-40 Products](#))

Background: Amyloid precursor protein (APP) is a type I transmembrane protein expressed in many tissues and concentrated in the synapses of neurons; and is suggested as a regulator of synapse formation and neural plasticity. APP can be processed by two different proteolytic pathways. In one pathway; APP is cleaved by β - and γ -secretase to produce the amyloid- β -protein (A β ; Abeta; beta-amyloid) which is the principal component of the amyloid plaques; the major pathological hallmark of Alzheimer's disease (AD); while in the other pathway; α -secretase is involved in the cleavage of APP whose product exerts anti-amyloidogenic effect and prevention of the A β peptide formation. The aberrant accumulation of aggregated beta-amyloid peptides (Abeta) as plaques is a hallmark of AD neuropathology and reduction of Abeta has become a leading direction of emerging experimental therapies for the disease. Besides this pathological function of Abeta; recently published data reveal that Abeta also has an essential physiological role in lipid homeostasis. Cholesterol increases Abeta production; and conversely Abeta production causes a decrease in cholesterol synthesis. Abeta may be part of a mechanism controlling synaptic activity; acting as a positive regulator presynaptically and a negative regulator postsynaptically. The pathological accumulation of oligomeric Abeta assemblies depresses excitatory transmission at the synaptic level; but also triggers aberrant patterns of neuronal circuit activity and epileptiform discharges at the network level. Abeta-induced dysfunction of inhibitory interneurons likely increases synchrony among excitatory principal cells and contributes to the destabilization of neuronal networks. There is evidence that beta-amyloid can impair blood vessel function. Vascular beta-amyloid deposition; also known as cerebral amyloid angiopathy; is associated with vascular dysfunction in animal and human studies. Alzheimer disease is associated with morphological changes in capillary networks; and soluble beta-amyloid produces abnormal vascular responses to physiological and pharmacological stimuli.

Synonym: AAA;ABETA;ABPP;AD1;APPI;CTFgamma;CVAP;PN-II;PN2

Molecular Weight: 31.8 kDa

Application Details

Comment: 33 kDa

Restrictions: For Research Use only

Handling

Format: Lyophilized

Handling

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| Reconstitution: | Please refer to the printed manual for detailed information. |
| Buffer: | Lyophilized from sterile 50 mM Tris, 500 mM NaCl, pH 7.5 |
| Storage: | 4 °C,-20 °C,-80 °C |
| Storage Comment: | Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months. |