## **Elabscience**®

## Recombinant Human Beta-amyloid 39/Beta-APP39 Protein (aa 672-710, His &GST Tag)

## Catalog Number: PKSH031464

Note: Centrifuge before opening to ensure complete recovery of vial contents.

Description	
Species	Human
Source	E.coli-derived Human Beta-amyloid 39/Beta-APP39 protein Asp672-Val710, with an N-
	terminal His & GST
Calculated MW	32.2 kDa
Observed MW	34 kDa
Accession	P05067-1
Bio-activity	Not validated for activity
Properties	
Purity	> 85 % as determined by reducing SDS-PAGE.
Endotoxin	Please contact us for more information.
Storage	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 $< -20^{\circ}$ C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile 50 mM Tris, 100 mM NaCl, 20% glycerol, 0.05% Tween 20,
	pH 9.5
	Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants
	before lyophilization.
	Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.



> 85 % as determined by reducing SDS-PAGE.

Background

Data

For Research Use Only

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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  $\beta$ - and  $\gamma$ -secretase to produce the amyloid- $\beta$ -protein (A $\beta$ , 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,  $\alpha$ -secretase is involved in the cleavage of APP whose product exerts antiamyloidogenic effect and prevention of the A $\beta$  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. 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. 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.