

Human Amyloid Beta 1-42 (High Sensitivity) ELISA Kit

High sensitivity sandwich ELISA for human A β 1-42 — 1.34 pg/mL LOD enabling reliable

detection in plasma and serum for AD biomarker research. The Human Amyloid Beta 1-42 (High Sensitivity) ELISA Kit provides quantitative sandwich immunoassay detection of human A β 1-42 with an LOD of 1.34 pg/mL and a range of 4.69–300 pg/mL. This sensitivity enables reliable detection in plasma and serum, where A β 42 concentrations typically fall in the range of 50–150 pg/mL by immunoassay. Used alongside ENZ-KIT274 (A β 1-40), it supports the A β 42/40 ratio calculation, the clinically preferred metric for amyloid pathology assessment.

Amyloid Beta 1-42 (A β 42) is a highly aggregation-prone amyloid- β peptide derived from proteolytic processing of amyloid precursor protein (APP) by β - and γ -secretases. A β 42 is a major component of amyloid plaques in Alzheimer's disease (AD). CSF A β 42 levels are typically reduced in AD, reflecting its deposition in amyloid plaques, while plasma A β 42 levels may also be lower in affected individuals. The A β 42/A β 40 ratio generally provides better discrimination of amyloid pathology than A β 42 alone and has demonstrated strong associations with amyloid PET status. Plasma A β 42/A β 40 is being used and evaluated as a blood-based prescreening biomarker for amyloid pathology in Alzheimer's disease research and clinical trial recruitment, with performance dependent on the assay and study population.

Ordering Information

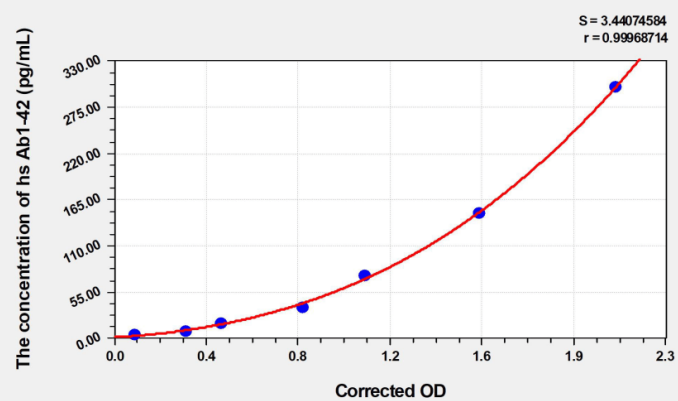
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ENZ-KIT273-0001	
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Manuals, SDS & CofA

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- **High sensitivity: 1.34 pg/mL LOD** — enables reliable detection in plasma and serum
- Detection range: 4.69–300 pg/mL — validated for plasma and serum
- Use with ENZ-KIT274 (A β 1-40) to calculate the A β 42/40 ratio
- Validated for **serum** and **plasma**
- 96-well breakaway strip format; intra-assay CV <8%; inter-assay CV <10%



Representative Standard Curve — Human Amyloid Beta 1-42 (High Sensitivity) ELISA Kit

Handling & Storage

Use/Stability	When stored and handled as directed, the kit is stable until the expiration date on the label.
Handling	Store at 4°C upon receipt. For extended storage, keep at -20°C. Use before the expiry date printed on the label.
Short Term Storage	+4°C
Long Term Storage	-20°C
Shipping	Blue Ice

Regulatory Status

RUO - Research Use Only

Product Details

Application	ELISA
Application Notes	Quantification of Aβ42 in plasma and serum for Alzheimer’s disease biomarker research. Pair with ENZ-KIT274 (Aβ1-40) to calculate the Aβ42/40 ratio. Suitable for amyloid processing studies and γ-secretase inhibitor assays. Primary validated matrices: serum and plasma. Other sample types should be verified prior to use.
Assay Time	3.5 hours
Compatibility	Standard 96-well microplate reader capable of reading absorbance at 450 nm.
Contents	Pre-Coated Microplate, 96 well (12 breakaway strips of 8); Standard (Lyophilized); Biotinylated Detection Antibody (100×); Streptavidin-HRP Conjugate (100×); Standard/Sample Diluent Buffer; Biotinylated Antibody Diluent; HRP Diluent; Wash Buffer (25×); TMB Substrate Solution; Stop Reagent; Adhesive Plate Covers
Gene/Protein Identifier	APP
Sensitivity	1.34 pg/mL (Detection range: 4.69–300 pg/mL)
Species Reactivity	Human
Specificity	Human Amyloid Beta 1-42 (High Sensitivity)

Technical Info / Product Notes

Two-step sequential sandwich ELISA. Capture antibody pre-coated on breakaway 96-well strips. Step 1: sample/standard incubation, 37°C, 80 min. Step 2: biotinylated detection antibody, 37°C, 50 min. Step 3: Streptavidin-HRP, 37°C, 50 min. Step 4: TMB substrate, 37°C, 20 min (protected from light). Stop reagent added; read at 450 nm. Intra-assay CV <8%; inter-assay CV <10%. Standard reconstituted in Standard/Sample Diluent Buffer. Do not mix reagents from different lot numbers (exception: TMB, Wash Buffer, Stop Reagent). Azide-free buffers required — azide inhibits HRP color development.

Detection range: 4.69–300 pg/mL. Sensitivity: 1.34 pg/mL. Plasma Aβ42 typically 5–15 pg/mL in healthy adults; reduced in AD. CSF Aβ42: typically 500–1,500 pg/mL in controls, reduced to 200–600 pg/mL in AD.

UniProt ID P05067

Wavelength 450 nm



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