

# Alzheimer's Disease Biomarkers Multiplex Detection Kit

## Flow-fluorescence Immunoassay

Alzheimer's disease (AD) is a progressive neurodegenerative disorder and the most common cause of dementia, accounting for 60-80% of cases. It is characterized by the accumulation of amyloid-beta plaques and neurofibrillary tangles (tau protein) in the brain, leading to neuronal damage, synaptic loss, and brain atrophy.

AD faces significant challenges in early diagnosis, particularly during the stages of subjective cognitive decline (SCD) and mild cognitive impairment (MCI), where atypical symptoms are often overlooked. Blood-based biomarker testing, with its advantages of being non-invasive, convenient, and repeatable, offers a breakthrough solution for the early screening, diagnosis, and prognosis of AD.

### Testing Principle

This kit utilizes flow fluorescence immunoassay technology to quantitatively measure the concentrations of phosphorylated Tau217 (pTau217), phosphorylated Tau181 (pTau181),  $\beta$ -amyloid 1-40 ( $A\beta$ 1-40),  $\beta$ -amyloid 1-42 ( $A\beta$ 1-42), glial fibrillary acidic protein (GFAP), neurofilament light chain (NFL), and  $\alpha$ -synuclein ( $\alpha$ -SYN) in human plasma or serum.



Product Features



Comprehensive Biomarkers

Covers 7 key AD biomarkers for precise diagnosis & monitoring



Patient-Friendly

Serum/plasma-based testing eliminates invasive collection



High Sensitivity

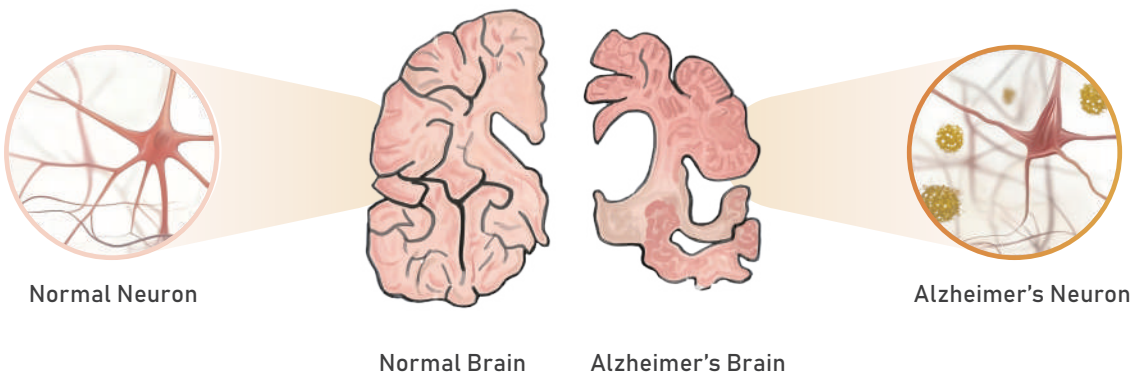
Detects biomarkers at pg/mL level



Cold Chain Free

Reagents are stable for shipping at room temperature

 The brain of an Alzheimer's patient shows significant atrophy, ventricular enlargement, and the hallmark accumulation of amyloid plaques and neurofibrillary tangles.



Detected Biomarkers

| Biomaker      | Detection Significance  |
|---------------|---|
| pTau217       | Critical tau phosphorylation site in early AD, enabling detection of initial pathological changes and supporting early clinical intervention                                |
| pTau181       | Effectively differentiates AD from other neurodegenerative disorders while serving as a progression biomarker to monitor disease advancement                                |
| Aβ1-42/Aβ1-40 | Reflects cerebral amyloid deposition for risk stratification, pathological burden assessment, early screening, and anti-amyloid therapy evaluation                          |
| GFAP          | Identifies neuroinflammatory status, assists in determining disease severity, and serves as a potential monitoring indicator  |
| NFL           | Monitors neuronal integrity for prognosis assessment and dynamic disease tracking   |
| α-SYN         | Evaluates synaptic dysfunction and supports differential diagnosis of neurodegenerative diseases  |
| Platform      | This kit is compatible with the BD FACSCanto™ II Clinical Flow Cytometry System, as well as other flow cytometers equipped with APC and PE fluorescence detection channels. |

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