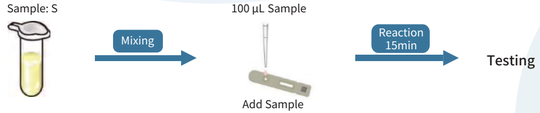
Advantages

- High accuracy
- High specificity and sensitivity
- Early screening
- Simple and rapid

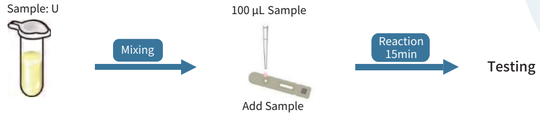
Products

Test item	Methodology	Sample type	Sample volume	Reaction time	Linearity range
Aβ1-42	FIA	Serum	100μl	15min	31.5-500pg/ml
p-tau-181	FIA	Serum	100μl	15min	5-100pg/ml
AD7c-NTP	FIA	Urine	100μl	15min	0.25-9.5ng/ml

Steps of Operation (Aβ1-42 & P-tau-181)



Steps of Operation (AD7c-NTP)



Applicable devices

LS-1100

LS-2100

LS-4000

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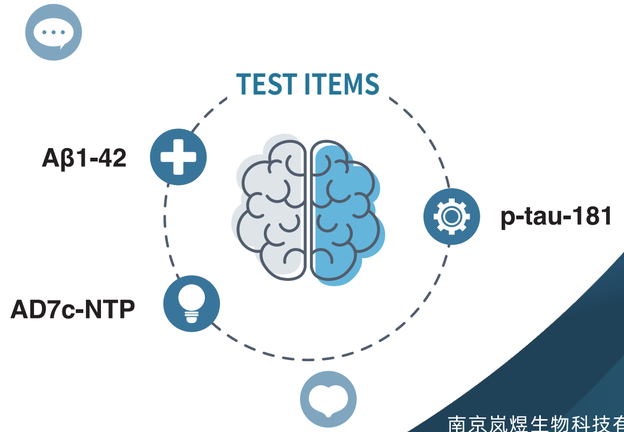
Alzheimer's Disease (AD) Biomarker Solutions

- Early screening ✓
- Early diagnosis ✓
- Early intervention ✓



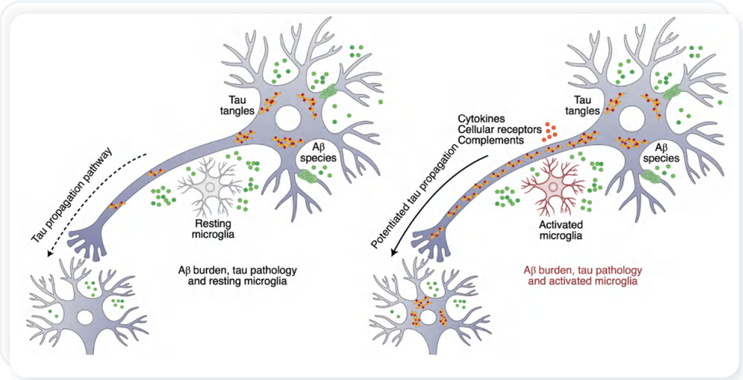
南京岚煜生物科技有限公司
Lansion Biotechnology Co., Ltd.

Alzheimer's disease (AD)

As of 2020, there were approximately 50 million people worldwide with Alzheimer's disease. It most often begins in people over 65 years of age, although up to 10% of cases are early-onset impacting those in their 30s to mid-60s. It affects about 6% of people 65 years and older, and women more often than men.

The cardinal pathological features of AD

1 Amyloid plaques 2 Neurofibrillary tangles 3 Neuroinflammation



The progression of Alzheimer's disease from brain changes that are unnoticeable by the person affected to brain changes that cause memory problems and eventually physical disability is called the Alzheimer's disease continuum.On this continuum, there are three broad phases.

Preclinical diagnosis 01

- No symptoms but possible biological changes in the brain

Mild cognitive impairment (MCI) 02

- Very mild symptoms that may not interfere with everyday activities

Dementia 03

- Memory, language, thinking or behavioral symptoms that impair a person's ability to function in daily life

Early diagnosis of Alzheimer disease (AD) through the use of biomarkers could assist in the implementation and monitoring of early therapeutic interventions, and has the potential to significantly modify the course of the disease.

Dementia Due to AD Mild	Dementia Due to AD Moderate	Dementia Due to AD Severe
Symptoms interfere with some everyday activities	Symptoms interfere with many everyday activities	Symptoms interfere with most everyday activities

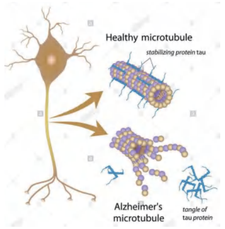
Indicators

Aβ1-42

Amyloid-β (Aβ) is the predominant pathologic protein in Alzheimer' s disease (AD). The production and deposition of Aβ are important factors affecting AD progression and prognosis. The deposition of neurotoxic Aβ contributes to damage of the blood–brain barrier.

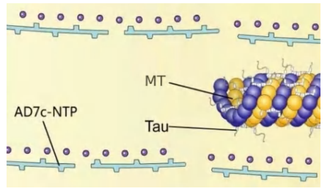
p-Tau-181

Tau is a stabilizing MT associated protein, whose functions are mainly regulated by phosphorylation. Tau is found hyperphosphorylated in AD, which might account for its loss of MT stabilizing capacity.



AD7c-NTP

AD7c-NTP is an approximately 41-kD brain protein present in the long axonal processes that emerge from the nerve cell body, is associated with the pathological changes of AD, and is selectively elevated in the AD brains.



Biomarkers for Alzheimer's Disease Early Diagnosis

Blood test
Urine test

Clinical significance

Early diagnosis of Alzheimer disease (AD) through the use of biomarkers could assist in the implementation and monitoring of early therapeutic interventions. Combined testing, combined with clinical diagnosis, comprehensively assess the patient's condition and further improve the accuracy of disease diagnosis.

Biomarkers	Normal range	Test result	Sensitivity	Specificity	Diagnosis period
Aβ1-42	＜110pg/ml	↓	High	High	Early-mid stage of AD
p-tau-181	⩽30pg/ml	↑	High	High	Early-mid stage of AD
AD7c-NTP	⩽1.5ng/ml	↑	Low	Low	Early-mid stage of AD