LifeLabs®

Blood-based beta-amyloid biomarker testing offers a promising pathway to a better understanding of risk for Alzheimer's disease[1]

LifeLabs® Beta-Amyloid 42/40 Ratio quantifies one of the earliest Alzheimer's disease biomarkers

Measuring beta-amyloid 42/40 ratio (Aβ42/40) via plasma has been associated with uncovering increased risk of developing Alzheimer's disease.[2,3]

LifeLabs® Beta-Amyloid 42/40 Ratio blood-based testing provides an accessible, affordable tool as part of Alzheimer's disease risk assessment and ongoing monitoring. The insights gained from this test can also influence further comprehensive testing needs or interventions.

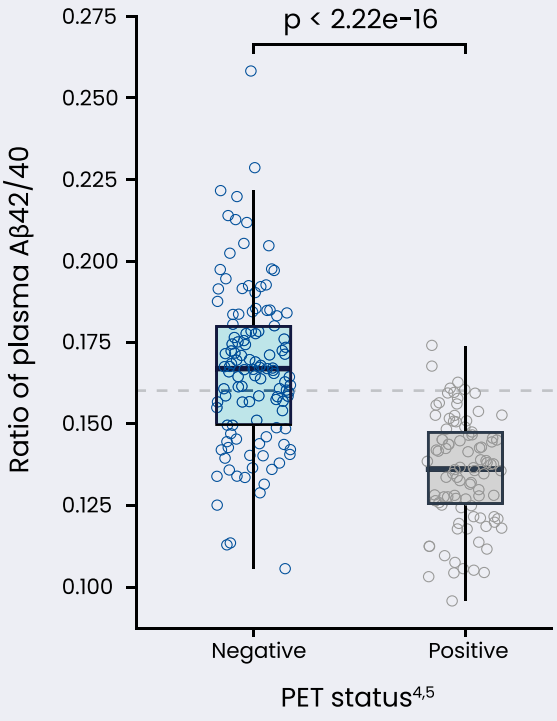
Detection of beta-amyloid (Aβ) levels in plasma correlate with Aβ-PET

LifeLabs® Beta-Amyloid 42/40 Ratio aids in the assessment of Alzheimer's disease progression by quantifying one of the earliest detectable blood-based biomarkers associated with Alzheimer's disease. Our high-precision assay has been shown to be significantly correlated with amyloid positron emission plasma tomography (Aβ-PET) levels.[4,5]

Accessible, cost-effective, blood-based assessment to guide the care pathway

Blood-based biomarker tests offer unparalleled accessibility and convenience, enabling a broader population to access early diagnosis and monitoring for AD. LifeLabs® is one of the largest Canadian labs with a vast network of Patient Service Center (PSC) locations conveniently located across B.C., Ontario and Saskatchewan.

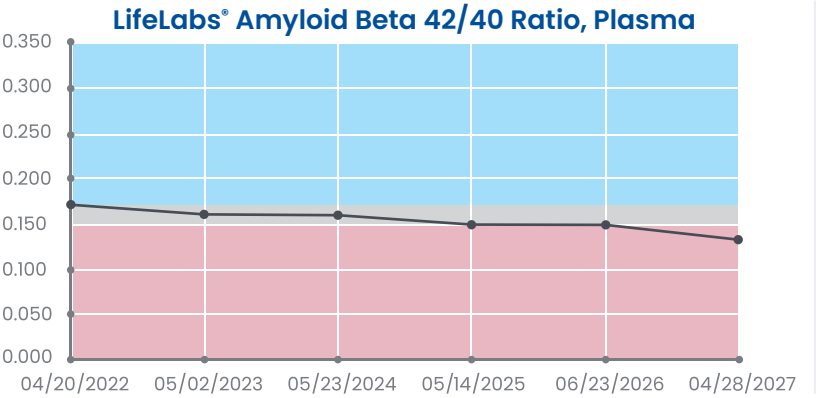
LifeLabs® Aβ42/Aβ40 ratio is shown to be significantly correlated with Aβ-PET levels



LifeLabs® is committed to advancing the science behind accessible diagnostic solutions that can transform care and optimize outcomes for patients with cognitive health conditions.

Plan your approach to care

LifeLabs® Beta-Amyloid 42/40 Ratio helps to identify early disease indicators that pave the way for timely action. Evaluating these blood-based biomarker levels can guide care decisions, including: further diagnostic testing, lifestyle changes, and other interventions that may mitigate disease progression.



Higher risk of AD: < 0.150 (low ratio)
Likely indication of amyloid pathology. Consider follow up AD-related testing.

Intermediate risk of AD: 0.150 to 0.169
Possible indication of amyloid pathology. Consider follow up AD-related testing and monitoring.

Lower risk of AD: ≥ 0.170 (high ratio)
Strong indication of non-Alzheimer's disease etiology. Consider alternative cognitive testing.

Our enhanced report provides Aβ42/40 ratio values from **current and 5 past results in 1 table,** so you can monitor your patient's beta-amyloid ratio as a component of their risk.

Ordering information

Test code (ON)	Test name	Turnaround time	Test use
5639	LifeLabs® Beta-Amyloid 42/40 Ratio, Plasma	12 days	Detect beta-amyloid (Aβ) levels, one of the earliest biomarkers associated with AD risk; levels can be monitored over time
5637	LifeLabs® Phosphorylated tau217 (p-tau217), Plasma	10 days	Determine levels of p-tau217 proteins, a dynamic and specific biomarker to aid in differentiating AD from other neurodegenerative diseases
5638	LifeLabs® Apolipoprotein E (ApoE), Plasma	12 days	Assess ApoE isoforms to help determine hereditary AD risk, as well as risk for amyloid-related imaging abnormalities (ARIA)
5640	LifeLabs® Phosphorylated tau181 (p-tau181), Plasma	10 days	Determine levels of p-tau181 proteins, a diagnostic biomarker that is useful in predicting the cognitive decline in AD/MCI patients and correlates with amyloid and tau PET results.
5641	LifeLabs® Neurofilament Light Chain (NfL), Plasma	9 days	Determine levels of NfL to assess neuronal damage from neurodegenerative diseases, such as AD and multiple sclerosis, and traumatic brain injuries like those caused by concussions.
5089	LifeLabs® ABeta 42/40 and p-tau217 Evaluation, Plasma	10 days	Evaluates plasma Aβ42/40 ratios and p-tau217 levels reporting out the likelihood that a symptomatic patient suspected of AD has a High, Indeterminant, or Low likelihood of amyloid pathology consistent with AD.

Please note: all are blood tests.

The LifeLabs® Beta-Amyloid 42/40 Ratio is designed to monitor Aβ 42/40 changes over time to help assess the risk potential of Alzheimer's disease progression. Initial test results may serve as a baseline with which later test results can be compared. There is no one test that can diagnose AD. Results of the LifeLabs® Beta-Amyloid 42/40 Ratio test should be considered in the context of patient management that evaluates symptoms, history, and other factors.

Learn about our testing and insights that can optimize the care pathway for Alzheimer's disease at **LifeLabs.com/alzheimers-disease** or **click here** to download requisition.

To receive the latest news and updates from LifeLabs, please join our email list by clicking the 'sign up' button.

Sign up

Patient sex, environment, race, ethnicity, and presence of other risk alleles also contribute to the risk of AD associated with ApoE genotype.[3]

References
1. Hampel H, Hu Y, Cummings J, et al. Blood-based biomarkers for Alzheimer's disease: Current state and future use in a transformed global healthcare landscape. Neuron. 2023;111(18):2781-2799.doi:10.1016/j.neuron.2023.05.017 **2.** Nakamura A, Kaneko N, Villemagne V, et al. High performance plasma amyloid-B biomarkers for Alzheimer's disease. Nature. 2018;554(7691):249-254. doi:10.1038/nature25456 **3.** Weber DM, Taylor SW, Lagier RJ, et al. Clinical utility of plasma Aβ42/40 ratio by LC-MS/MS in Alzheimer's disease assessment. Frontiers in Neurology. 2024;15. doi: 10.3389/fneur.2024.1364658 **4.** Data on fi le. Quest Diagnostics; 2022. **5.** Burnham SC, Fandos N, Fowler C, et al. Longitudinal evaluation of the natural history of amyloid-β in plasma and brain. Brain Commun. 2020;2(1)fcaa041. doi:10.1093/braincomms/fcaa041 **6.** Ashton NJ, Brum WS, Molfetta GD, et al. Diagnostic accuracy of a plasma phosphorylated tau 217 immunoassay for Alzheimer disease pathology. JAMA Neurol. 2024;81(3):255-263.doi:10.1001/jamaneurol.2023.5319

Test codes may vary by location. Please contact your local laboratory for more information.