

## Plasma phosphorylated Tau 181 (pTau 181)

Test Name	Plasma phosphorylated Tau 181
Abbreviation	Plasma pTau181
CPT code	83520
Methodology	Single Molecule Array (SIMOA)
Intended Use	Research Use Only (RUO)
Test requirements	<u>Specimen Type:</u> EDTA-plasma <u>Minimum volume:</u> 0.5 mL <u>Preferred volume:</u> 5 mL <u>Rejection criteria:</u> Sample arrives thawed; grossly hemolytic, icteric, or lipemic
Specimen collection	<ul style="list-style-type: none"> <li>No patient preparation required before collection.</li> <li>5 mL EDTA lavender-top tubes</li> <li>Within an hour of collection spin, aliquot, and freeze plasma. Ship frozen on dry-ice.</li> </ul>
Specimen stability	Store frozen (-80 – -70°C preferred) Sample should be transported frozen, avoid freeze/thaws.
Test schedule	Once a week
TAT	1 – 2 weeks
Limitations	<ul style="list-style-type: none"> <li>Test results are for research use only. Not to be used for diagnostic purposes.</li> <li>Heterophilic antibodies in human serum can react with reagent immunoglobulins, interfering with immunoassays. People routinely exposed to animals or animal serum products or who have received mouse monoclonal antibodies for diagnosis or therapy can be prone to this interference. Such specimens may show either falsely elevated or falsely depressed values.</li> </ul>
References	<ul style="list-style-type: none"> <li>Rissin DM, et al. Single-molecule enzyme-linked immunosorbent assay detects serum proteins at subfemtomolar concentrations. <i>Nat Biotech.</i> 2010 Jun;28(6):595-9.</li> <li>Kumar P, et al. Plasma p-tau181 concentration accurately predicts clinically diagnosed Alzheimer's Disease cases. <i>Alzheimer's &amp; Dementia.</i> 2022 Dec;18:e068059.</li> <li>Kim K, et al. Clinically accurate diagnosis of Alzheimer's disease via multiplexed sensing of core biomarkers in human plasma. <i>Nat Comm.</i> 2020 Jan 8;11(1):119.</li> <li>Frykman H. et al. AAIC 2022, San Diego USA</li> </ul>