

## Plasma Glial Fibrillary Acidic Protein (GFAP)

| Test Name           | Neurofilament Light Chain; Glial Fibrillary Acidic Protein   |
|---------------------|--|
| Abbreviation        | NP2B (Nf-Light and GFAP)   |
| CPT code            | N/A (Research Use Only)  |
| Methodology         | Single Molecule Array (SIMOA)  |
| Intended Use        | Research Use Only (RUO)  |
| Test requirements   | <u>Specimen Type</u> : EDTA-plasma<br><u>Minimum volume</u> : 0.5 mL<br><u>Preferred volume</u> : 5 mL<br><u>Rejection criteria</u> : 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)<br>Sample should be frozen until transport, avoid freeze/thaws.   |
| Test schedule       | Once a week  |
| TAT                 | 1 – 3 days   |
| Reference range     | TBD  |
| 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>Benedet AL, et al. Differences between plasma and cerebrospinal fluid glial fibrillary acidic protein levels across the Alzheimer disease continuum. <i>JAMA Neurol.</i> 2021 Dec 1;78(12):1471-83.</li> <li>Khalil M, et al. Serum neurofilament light levels in normal aging and their association with morphologic brain changes. <i>Nat Comm.</i> 2020 Feb 10;11(1):812.</li> <li>Tybirk L, et al. Serum GFAP—reference interval and preanalytical properties in Danish adults. <i>CCLM.</i> 2022 Oct 26;60(11):1830-8.</li> </ul> |