

TEST DIRECTORY

BC Neuroimmunology offers the following tests:

Accredited tests covered under the British Columbia Medical Services Plan (MSP):

- [Acetylcholine receptor antibodies \(AChR Ab; RIPA\)](#)
- [Muscle-specific tyrosine kinase \(MuSK\) antibodies](#)
- [Voltage-gated calcium channel \(VGCC\) antibodies](#)

Other accredited tests:

- [Clustered acetylcholine receptor antibodies \(AChR Ab; cell-based assay\)](#)
- [Aquaporin-4 \(AQP4\) antibodies](#)
- [Myelin oligodendrocyte glycoprotein \(MOG\) antibodies](#)
- [Autoimmune encephalitis panel \(NMDAR, GABAB, DPPX, LGI1, CASPR2, & AMPAR\)](#)
- [Anti-voltage-gated potassium channel \(VGKC\) associated protein \(LGI1 & CASPR2\) antibodies](#)
- [Comprehensive Autoimmune encephalitis & Paraneoplastic \(neuronal\) Panel](#)
- [Individual antibody for Autoimmune encephalitis & Paraneoplastic Neurologic Syndrome](#)
- [Paraneoplastic \(neuronal\) antibody panel \(immunoblot\)](#)
- [Chronic inflammatory demyelinating Polyneuropathy \(CIDP\) antibody panel](#)
- [Phosphorylated-tau-217 \(pTau217\)](#)

Referred laboratory tests:

- [Apolipoprotein E \(APOE\) genotyping](#)
- [Amyloid-beta 42/40 \(A \$\beta\$ 42/40\)](#)
- [Neurofilament-Light Chain \(NfL\)](#)
- [Phosphorylated-tau-181 \(pTau181\)](#)
- [Total tau \(tTau\)](#)
- [Glial fibrillary acidic protein \(GFAP\)](#)
- [Phosphorylated-tau-217/ \$\beta\$ -Amyloid 1-42 Plasma Ratio \(pTau217/ A \$\beta\$ 42 Ratio\)](#)
- [CSF Panel 4 Biomarkers \(A \$\beta\$ 42/40 Ratio, pTau181, tTau\)](#)
- [CSF Panel 5 Biomarkers \(A \$\beta\$ 42/40 Ratio, NfL, pTau181, tTau\)](#)

Tests being offered for research use only:

- [Low-density Lipoprotein Receptor-related Protein 4 Antibodies \(LRP4 Ab\)](#)

Please note that turnaround times are on business days.

Name of test	<i>Acetylcholine receptor antibodies</i>
Abbreviations, alternate names	AchR Ab, anti-AchR Ab, Myasthenia gravis (MG) autoantibodies
BC MSP Fee code	91020 (Qualitative), 91021 (Quantitative; upon positive result of qualitative test)
Methodology	In-house radioimmunoprecipitation assay (RIA/RIPA), binding and blocking assays
Test requirements	<i>Specimen type:</i> Serum Minimum volume: 1 mL Preferred volume: 5 mL <i>Other rejection criteria:</i> grossly hemolyzed and/or grossly lipemic serum Samples must be received with a completed lab requisition with, at minimum, patient information (name, DOB, provincial health care number), ordering physician, and requesting laboratory information.
Specimen collection	No patient preparation is required for sample collection. Draw blood in tube(s) with SST activator (gold-top) enough for a total of 1 to 5 mL serum.
Specimen handling	Spin SST tube(s), pool serum (if necessary), freeze, then batch for delivery on ice packs.
Specimen stability	Serum samples may be stored at 2 to 8°C for up to 1 week or stored at –20°C for longer periods of time (months)
Testing frequency	Once a week
Turnaround time	9 days
Reference Values	Negative Positives are reported with a quantitative result
Additional Information	Please indicate if patients are on or have recently had IVIG treatment so that we may adjust our assay accordingly. For same-day STAT testing for preliminary results (BC only), please call us at 604-296-9828 prior to sample send out. Sample must be received at our laboratory <u>before</u> 11am of that day to qualify for this service or it will be run the next day.

Name of test	<i>Muscle-specific tyrosine kinase antibodies</i>
Abbreviations, alternate names	MuSK Ab
BC MSP Fee code	91022
Methodology	In-house radioimmunoprecipitation assay (RIA/RIPA)
Test requirements*	<i>Note: Please see Additional Information on guidelines for MuSK Ab testing coverage under provincial health services.</i> <i>Specimen type:</i> Serum Minimum volume: 1 mL Preferred volume: 5 mL <i>Other rejection criteria:</i> grossly hemolyzed and/or grossly lipemic serum Samples must be received with a completed lab requisition with, at minimum, patient information (name, DOB, provincial health care number), ordering physician, and requesting laboratory information.
Specimen collection	No patient preparation is required for sample collection. Draw blood in tube(s) with SST activator (gold-top) enough for a total of 1 to 5 mL serum.
Specimen handling	Spin SST tube(s), pool serum (if necessary), freeze, then batch for delivery on ice packs.
Specimen stability	Serum samples may be stored at 2 to 8°C for up to 1 week or stored at –20°C for longer periods of time (months)
Testing frequency	Once a week
Turnaround time	14 days
*Additional Information	As per the Medical Services Commission (MSC) guidelines, if this test is to be billed through provincial health services, it must be requested by a neurologist, ophthalmologist, or a neuro-ophthalmologist and the patient must have tested negative for AchR Ab within the last 18 months, through BC Neuroimmunology or another laboratory. If testing was performed by another laboratory, a copy of the results from the other laboratory must be attached or stated on the requisition by the ordering physician. The MSC does <u>not</u> cover repeat testing for patients previously negative for MuSK Ab within 18 months of the last test date. For MuSK Ab testing that is ordered as reflex testing to AchR Ab, MuSK testing is performed only after AchR Ab testing and will not be done if the patient is AchR Ab positive. This may affect the turnaround time.

Name of test	<i>Voltage-gated calcium channel antibodies</i>
Abbreviations, alternate names	VGCC Ab
BC MSP Fee code	91861
Methodology	Commercial radioimmunoprecipitation kit (Kronus®)
Test requirements*	<i>Note:</i> Please see Additional Information on guidelines for VGCC Ab testing coverage under provincial health services. <i>Specimen type:</i> Serum Minimum volume: 1 mL Preferred volume: 5 mL <i>Other rejection criteria:</i> grossly hemolyzed and/or grossly lipemic serum Samples must be received with a completed lab requisition with, at minimum, patient information (name, DOB, provincial health care number), ordering physician, and requesting laboratory information.
Specimen collection	No patient preparation is required for sample collection. Draw blood in tube(s) with SST activator (gold-top) enough for a total of 1 to 5 mL serum.
Specimen handling	Spin SST tube(s), pool serum (if necessary), freeze, then batch for delivery on ice packs.
Specimen stability	Serum samples may be stored at 2 to 8°C for up to 1 week or stored at –20°C for longer periods of time (months)
Testing frequency	Once a month
Turnaround time	30 days
*Additional Information	If this test is to be billed through provincial health services, it <i>must</i> be requested by a neurologist as per MSC guidelines. The MSC does not cover repeat VGCC Ab testing as it is a once-in-a-lifetime test.

Name of test	<i>Clustered acetylcholine receptor antibodies</i>
Abbreviations, alternate names	Clustered AchR Ab, AchR CBA
Methodology	In-house live cell-based assay (CBA)
Test requirements	<i>Specimen type:</i> Serum Minimum volume: 1 mL Preferred volume: 5 mL <i>Other rejection criteria:</i> none Samples must be received with a completed lab requisition with, at minimum, patient information (name, DOB, provincial health care number), ordering physician, and requesting laboratory information.
Specimen collection	No patient preparation is required for sample collection. Draw blood in tube(s) with SST activator (gold-top) enough for a total of 1 to 5 mL serum.
Specimen handling	Spin SST tube(s), pool serum (if necessary), freeze, then batch for delivery on ice packs.
Specimen stability	Serum samples may be stored at 2 to 8°C for up to 1 week or stored at –20°C for longer periods of time (months)
Testing frequency	Once a week
Turnaround time	10 days
Additional Information	Clustered AchR antibody testing ordered with AchR antibody radioimmunoprecipitation will be performed as reflex testing, following completion of the AchR antibody radioimmunoprecipitation assay. Turnaround time may be affected. Clustered AchR Ab testing will <u>not</u> be done for patients that are positive for AchR Ab by radioimmunoprecipitation.

Name of test	<i>Aquaporin-4 antibodies</i>
Abbreviations, alternate names	AQP4 Ab, NMO Ab
Methodology	In-house live cell-based assay
Test requirements	<i>Specimen type:</i> Serum Minimum volume: 1 mL Preferred volume: 5 mL <i>Other rejection criteria:</i> none Samples must be received with a completed lab requisition with, at minimum, patient information (name, DOB, provincial health care number), ordering physician, and requesting laboratory information.
Specimen collection	No patient preparation is required for sample collection. Draw blood in tube(s) with SST activator (gold-top) enough for a total of 1 to 5 mL serum.
Specimen handling	Spin SST tube(s), pool serum (if necessary), freeze, then batch for delivery on ice packs.
Specimen stability	Serum samples may be stored at 2 to 8°C for up to 1 week or stored at –20°C for longer periods of time (months)
Testing frequency	Once a week (Wednesday)
Turnaround time	10 days (Samples received after Tuesday will be assigned to the next batch for testing, with an additional 5 days)

Name of test	<i>Myelin oligodendrocyte antibodies</i>
Abbreviations, alternate names	MOG Ab
Methodology	In-house live cell-based assay
Test requirements	<i>Specimen type:</i> Serum Minimum volume: 1 mL Preferred volume: 5 mL <i>Other rejection criteria:</i> none Samples must be received with a completed lab requisition with, at minimum, patient information (name, DOB, provincial health care number), ordering physician, and requesting laboratory information.
Specimen collection	No patient preparation is required for sample collection. Draw blood in tube(s) with SST activator (gold-top) enough for a total of 1 to 5 mL serum.
Specimen handling	Spin SST tube(s), pool serum (if necessary), freeze, then batch for delivery on ice packs.
Specimen stability	Serum samples may be stored at 2 to 8°C for up to 1 week or stored at –20°C for longer periods of time (months)
Testing frequency	Once a week (Wednesday)
Turnaround time	10 days (Samples received after Tuesday will be assigned to the next batch for testing, with an additional 5 days)

Name of test	<i>Autoimmune Encephalitis Panel (NMDAR, GABAB, DPPX, LGI1, CASPR2, & AMPAR Ab)</i>
Abbreviations, alternate names	Mosaic 6
Methodology	Commercial fixed cell-based assay (Euroimmun), all positives reflex to a tissue-based assay/ in-house CBA
Test requirements	<i>Specimen type:</i> CSF and/or Serum* Minimum volume: 1 mL Preferred volume: 3 mL <i>Other rejection criteria:</i> grossly icteric or lipemic serum. Samples must be received with a completed lab requisition with, at minimum, patient information (name, DOB, provincial health care number), ordering physician, and requesting laboratory information.
Specimen collection	No patient preparation is required for sample collection. <u>Serum:</u> Draw blood in tube(s) with SST activator (gold-top) enough for a total of 1 to 3 mL serum. <u>CSF:</u> Collect at least 1 mL into a sterile tube.
Specimen handling	<u>Serum:</u> Spin SST tube(s), pool serum (if necessary), freeze, then batch for delivery on ice packs. <u>CSF:</u> Samples may be stored at 2 to 8°C for short periods (up to 1 month). Preferred to be sent as soon as possible and to avoid freeze/thaw cycles.
Specimen stability	<u>Serum:</u> May be stored at 2 to 8°C for up to 1 week or stored at –20°C for longer periods of time (months) <u>CSF:</u> May be stored at 2 to 8°C for short periods (up to 1 month). Please avoid freeze/thaw cycles.
Testing frequency	Once a week
Turnaround time	7 days or 24 hours as requested* (see <i>Additional Information</i>)
*Additional Information	For same-day STAT testing (BC only), please call us at 604-296-9828 prior to sample send out. Sample must be received at our laboratory <u>before</u> 2pm of that day to qualify for this service or it will be run the next day.

Name of test	<i>Anti-voltage-gated potassium channel (VGKC) associated protein antibodies (LGI1 & CASPR2 Ab)</i>
Abbreviations, alternate names	VGKC Ab, LGI1 Ab, CASPR2 Ab
Methodology	Commercial fixed cell-based assay (Euroimmun), all positives reflex to a tissue-based assay/ in-house CBA
Test requirements	<i>Specimen type:</i> CSF and/or Serum Minimum volume: 1 mL Preferred volume: 3 mL <i>Other rejection criteria:</i> grossly icteric or lipemic serum Samples must be received with a completed lab requisition with, at minimum, patient information (name, DOB, provincial health care number), ordering physician, and requesting laboratory information.
Specimen collection	No patient preparation is required for sample collection. <u>Serum:</u> Draw blood in tube(s) with SST activator (gold-top) enough for a total of 1 to 3 mL serum. <u>CSF:</u> Collect at least 1 mL into a sterile tube.
Specimen handling	<u>Serum:</u> Spin SST tube(s), pool serum (if necessary), freeze, then batch for delivery on ice packs. <u>CSF:</u> Samples may be stored at 2 to 8°C for short periods (up to 1 month). Preferred to be sent as soon as possible and to avoid freeze/thaw cycles.
Specimen stability	<u>Serum:</u> May be stored at 2 to 8°C for up to 1 week or stored at –20°C for longer periods of time (months). <u>CSF:</u> May be stored at 2 to 8°C for short periods (up to 1 month). Please avoid freeze/thaw cycles.
Testing frequency	Once a week
Turnaround time	7 days

Name of test	<i>Comprehensive -in-house Testing Panel for Autoimmune Encephalitis & Paraneoplastic Neurologic Syndrome</i>	
Abbreviations, alternate names	NMDAR, GABAB, LGI1, CASPR2, DPPX, AMPAR, Amphiphysin, CV2, PNMA2, Ri, Yo, Hu, Recoverin, SOX1, Titin, Zic4, GAD65, Tr (DNER), GluR1, GluR5, GlyR, KLH11, GFAP, and IgLON5 (AEPP_24 Ag)	
Methodology	Screening with Euroimmun mosaic/paraneoplastic/immunoblot/tissue-based assay/in-house CBAs; all positives reflex to a tissue-based assay	
Test requirements	<i>Specimen type:</i> CSF and/or Serum Serum: CSF: Minimum volume: 1 mL Minimum volume: 3 mL Preferred volume: 3 mL Preferred volume: 5 mL <i>Other rejection criteria:</i> grossly icteric or lipemic serum Samples must be received with a completed lab requisition with, at minimum, patient information (name, DOB, provincial health care number), ordering physician, and requesting laboratory information.	
Specimen collection	No patient preparation is required for sample collection. <u>Serum:</u> Draw blood in tube(s) with SST activator (gold-top) enough for a total of 1 to 3 mL serum. <u>CSF:</u> Collect at least 3 mL into a sterile tube.	
Specimen handling	<u>Serum:</u> Spin SST tube(s), pool serum (if necessary), freeze, then batch for delivery on ice packs. <u>CSF:</u> Samples may be stored at 2 to 8°C for short periods (up to 1 month). Preferred to be sent as soon as possible and to avoid freeze/thaw cycles.	
Specimen stability	<u>Serum:</u> May be stored at 2 to 8°C for up to 1 week or stored at –20°C for longer periods of time (months) <u>CSF:</u> May be stored at 2 to 8°C for short periods (up to 1 month). Please avoid freeze/thaw cycles.	
Testing frequency	Once a week	
Turnaround time	21 days	
Additional Information	GluR1, GluR5, GlyR, KLH11, GFAP, and IgLON5 Ab are for research use only.	

Name of test	Individual Antibody (NMDAR, LGI1 & CASPR2, AMPAR, GABAB, DPPX, GAD65, IgLON5, GFAP) for Autoimmune Encephalitis & Paraneoplastic Neurologic Syndrome
Abbreviations, alternate names	NMDAR, LGI1 & CASPR2 (VGKC), AMPAR, GABAB, DPPX, GAD65, IgLON5, GFAP
Methodology	Mosaic/in-house CBAs; all positives reflex to a tissue-based assay
Test requirements	<i>Specimen type:</i> CSF and/or Serum Minimum volume (for each antibody): 1 mL Preferred volume (for each antibody): 3 mL <i>Other rejection criteria:</i> grossly icteric or lipemic serum Samples must be received with a completed lab requisition with, at minimum, patient information (name, DOB, provincial health care number), ordering physician, and requesting laboratory information.
Specimen collection	No patient preparation is required for sample collection. <u>Serum:</u> Draw blood in tube(s) with SST activator (gold-top) enough for a total of 0.5 to 1 mL serum. <u>CSF:</u> Collect at least 0.5 mL into a sterile tube.
Specimen handling	<u>Serum:</u> Spin SST tube(s), pool serum (if necessary), freeze, then batch for delivery on ice packs. <u>CSF:</u> Samples may be stored at 2 to 8°C for short periods (up to 1 month). Preferred to be sent as soon as possible and to avoid freeze/thaw cycles.
Specimen stability	<u>Serum:</u> May be stored at 2 to 8°C for up to 1 week or stored at –20°C for longer periods of time (months) <u>CSF:</u> May be stored at 2 to 8°C for short periods (up to 1 month). Please avoid freeze/thaw cycles.
Testing frequency	Once a week
Turnaround time	14 days
Additional Information	GFAP and IgLON5 Ab are for research use only. For same-day <u>NMDAR STAT</u> testing (BC only), please call us at 604-296-9828 prior to sample send out. Samples must be received at our laboratory <u>before</u> 2pm of that day to qualify for this service or it will be run the next day. STAT Testing can be done on CSF only, or CSF with accompanying serum, but <u>not</u> serum alone.

Name of test	<i>Paraneoplastic (Neuronal) antibody panel</i> <i>(Amphiphysin, Ri, Yo, Hu, CV2 (CRMP5), Recoverin, SOXL, Ticn, Zic4, GAD65, Tr (DNER), PNMA2 (Ma2/Ta))</i>						
Abbreviations, alternate names	Paraneoplastic neurological syndrome (PNS) Ab						
Methodology	Immunoblot and fixed cell-based assay with reflex rat brain immunohistochemistry						
Test requirements	<i>Specimen type:</i> <table> <tr> <td>Serum:</td><td>CSF:</td></tr> <tr> <td>Minimum volume: 1 mL</td><td>Minimum volume: 2 mL</td></tr> <tr> <td>Preferred volume: 3 mL</td><td>Preferred volume: 3 mL</td></tr> </table> <i>Other rejection criteria:</i> None Samples must be received with a completed lab requisition with, at minimum, patient information (name, DOB, provincial health care number), ordering physician, and requesting laboratory information.	Serum:	CSF:	Minimum volume: 1 mL	Minimum volume: 2 mL	Preferred volume: 3 mL	Preferred volume: 3 mL
Serum:	CSF:						
Minimum volume: 1 mL	Minimum volume: 2 mL						
Preferred volume: 3 mL	Preferred volume: 3 mL						
Specimen collection	No patient preparation is required for sample collection. <u>Serum</u>: Draw blood in tube(s) with SST activator (gold-top) enough for a total of 1 to 3 mL serum. <u>CSF</u>: Collect at least 2 mL into a sterile tube.						
Specimen handling	<u>Serum</u>: Spin SST tube(s), pool serum (if necessary), freeze, then batch for delivery on ice packs. <u>CSF</u>: May be stored at 2 to 8°C for short periods (up to 1 month). Please avoid freeze/thaw cycles.						
Specimen stability	Serum samples may be stored at 2 to 8°C for up to 1 week or stored at –20°C for longer periods of time (months)						
Testing frequency	Once a week						
Turnaround time	7 days						

Name of test	<i>Chronic Inflammatory Demyelinating Polyneuropathy Antibody Screen (NF140, NF155, NF186, CNTN1, CASPR1)</i>
Abbreviations, alternate names	CIDP Ab panel
Methodology	Fixed cell-based assay
Test requirements	<i>Specimen type:</i> Serum Minimum volume: 1 mL Preferred volume: 5 mL <i>Other rejection criteria:</i> grossly icteric serum Samples must be received with a completed lab requisition with, at minimum, patient information (name, DOB, provincial health care number), ordering physician, and requesting laboratory information.
Specimen collection	No patient preparation is required for sample collection. Serum: Draw blood in tube(s) with SST activator (gold-top) enough for a total of 1 to 5 mL serum.
Specimen handling	Serum: Spin SST tube(s), pool serum (if necessary), freeze, then batch for delivery on ice packs.
Specimen stability	Serum samples may be stored at 2 to 8°C for up to 1 week or stored at –20°C for longer periods of time (months)
Testing frequency	Once every two weeks
Turnaround time	21 days

Name of test	<i>Phosphorylated-tau-217</i>
Abbreviations, alternate names	pTau217
Methodology	Simoa® assay or Lumipulse® assay
Test requirements	<i>Specimen type:</i> Plasma Minimum volume: 1 mL Preferred volume: 5 mL <i>Other rejection criteria:</i> Plasma thawed upon arrival Samples must be received with a completed lab requisition with, at minimum, patient information (name, DOB, provincial health care number), ordering physician, and requesting laboratory information.
Specimen collection	No patient preparation is required for sample collection. <i>Blood collection tubes:</i> Plasma, use K2 EDTA lavender-top vacutainer tubes. Draw blood in collection tube(s) enough for a total of 1 to 5 mL plasma.
Specimen handling	Spin collection tubes, pool plasma (if necessary) and store refrigerated. Plasma samples may be stored after collection at 2 to 8°C but must be stored at -80°C if the sample will not be shipped immediately.
Specimen stability	Plasma samples stored at 2 to 8°C must be received at the laboratory within 48 hours of collection. If batch shipping, samples must be frozen (-80°C preferred) and shipped on dry ice. Samples should stay frozen until and during transport.
Testing frequency	Once a week
Turnaround time	8 days

Name of test	<i>Apolipoprotein E</i>
Abbreviations, alternate names	APOE
Methodology	TaqMan™ Assay
Test requirements	<i>Specimen type:</i> Whole blood Minimum volume: 2 mL Preferred volume: 5 mL <i>Other rejection criteria:</i> None Samples must be received with a completed lab requisition with, at minimum, patient information (name, DOB, provincial health care number), ordering physician, and requesting laboratory information.
Specimen collection	No patient preparation is required for sample collection. <i>Blood collection tubes:</i> For whole blood, use K2 EDTA lavender-top vacutainer tubes. Draw blood in collection tube(s) enough for a total of 2 to 5 mL of whole blood.
Specimen handling	Samples may be stored at 2 to 8°C for 2 days but is preferred to be sent as soon as possible.
Specimen stability	Samples may be stored at 2 to 8°C for up to 1 week or stored at –20°C for longer periods of time (months).
Testing frequency	Once a week
Turnaround time	7 days
Additional Information	Samples will be sent to Lykke Labs Inc. (DAP ID: 0613LM) for testing.

Name of test	<i>Amyloid-beta 42/40</i>
Abbreviations, alternate names	A β 42/40
Methodology	Lumipulse® assay
Test requirements	<i>Specimen type:</i> CSF Minimum volume: 1 mL Preferred volume: 2 mL <i>Other rejection criteria:</i> CSF thawed upon arrival Samples must be received with a completed lab requisition with, at minimum, patient information (name, DOB, provincial health care number), ordering physician, and requesting laboratory information.
Specimen collection	No patient preparation is required for sample collection. <i>CSF collection tubes:</i> For CSF, use 63.614.625 Sarstedt tubes. Draw CSF in a minimum of 2 collection tube(s) enough for a minimum of 1.5 mL of CSF in each tube.
Specimen handling	Aliquot (before freezing) into multiple 5 mL Sarstedt tubes. Freeze immediately after aliquoting (-80°C preferred). Avoid freeze-thaw cycles or multiple tube transfers.
Specimen stability	CSF samples <u>must</u> be stored after collection at -80°C, preferentially for a minimum of 1 hour. Samples should stay frozen until transported and shipped on dry ice.
Testing frequency	Once a week
Turnaround time	14 days
Additional Information	Samples will be sent to Neurocode USA (CLIA#: 50D2158817) for testing.

Name of test	<i>Neurofilament Light Chain</i>						
Abbreviations, alternate names	NfL						
Methodology	Lumipulse® assay						
Test requirements	<i>Specimen type:</i> <table> <tr> <td>CSF:</td><td>Serum / Plasma:</td></tr> <tr> <td>Minimum volume: 1 mL</td><td>Minimum volume: 1 mL</td></tr> <tr> <td>Preferred volume: 2 mL</td><td>Preferred volume: 5 mL</td></tr> </table> <i>Other rejection criteria:</i> Sample thawed upon arrival Samples must be received with a completed lab requisition with, at minimum, patient information (name, DOB, provincial health care number), ordering physician, and requesting laboratory information.	CSF:	Serum / Plasma:	Minimum volume: 1 mL	Minimum volume: 1 mL	Preferred volume: 2 mL	Preferred volume: 5 mL
CSF:	Serum / Plasma:						
Minimum volume: 1 mL	Minimum volume: 1 mL						
Preferred volume: 2 mL	Preferred volume: 5 mL						
Specimen collection	No patient preparation is required for sample collection. <u>CSF:</u> Use 63.614.625 Sarstedt tubes. Draw CSF in a minimum of 2 collection tube(s) enough for a minimum of 1.5 mL of CSF in each tube. <u>Plasma:</u> Draw blood in K2 EDTA lavender-top vacutainer tube(s) enough for a total of 1 to 5 mL plasma. <u>Serum:</u> Draw blood in tube(s) with SST activator (gold-top) enough for a total of 1 to 5 mL serum.						
Specimen handling	For CSF, aliquot (before freezing) into multiple 5 mL Sarstedt tubes. Freeze immediately after aliquoting (-80°C preferred). Avoid freeze-thaw cycles or multiple tube transfers. For plasma, spin collection tubes, pool plasma (if necessary) and store refrigerated. Samples must be received at the laboratory within 48 hrs of collection. If batch shipping, samples must be frozen (-80°C preferred) and shipped on dry ice. For serum, spin SST tube(s), pool serum (if necessary), freeze, then batch for delivery on ice packs.						
Specimen stability	CSF <u>must</u> be stored after collection at -80°C, preferentially for a minimum of 1 hour. Samples should stay frozen until transported and shipped on dry ice. Plasma and serum samples stored at 2 to 8°C must be received at the laboratory within 48 hours of collection. If batch shipping, samples must be frozen (-80°C preferred) and shipped on dry ice. Samples should stay frozen						

	until transport.
Testing frequency	Once a week
Turnaround time	8 days for plasma/serum or 14 days for CSF
Additional Information	Samples will be sent to Neurocode USA (CLIA#: 50D2158817) for testing.

Name of test	<i>Phosphorylated-tau-181</i>
Abbreviations, alternate names	pTau181
Methodology	Lumipulse® assay
Test requirements	<i>Specimen type:</i> CSF Minimum volume: 1 mL Preferred volume: 2 mL <i>Other rejection criteria:</i> CSF thawed upon arrival Samples must be received with a completed lab requisition with, at minimum, patient information (name, DOB, provincial health care number), ordering physician, and requesting laboratory information.
Specimen collection	No patient preparation is required for sample collection. <i>CSF collection tubes:</i> For CSF, use 63.614.625 Sarstedt tubes. Draw CSF in a minimum of 2 collection tube(s) enough for a minimum of 1.5 mL of CSF in each tube.
Specimen handling	Aliquot (before freezing) into multiple 5 mL Sarstedt tubes. Freeze immediately after aliquoting (-80°C preferred). Avoid freeze-thaw cycles or multiple tube transfers.
Specimen stability	CSF samples <u>must</u> be stored after collection at -80°C, preferentially for a minimum of 1 hour. Samples should stay frozen until transported and shipped on dry ice.
Testing frequency	Once a week
Turnaround time	14 days
Additional Information	Samples will be sent to Neurocode USA (CLIA#: 50D2158817) for testing.

Name of test	Total tau
Abbreviations, alternate names	tTau
Methodology	Lumipulse® assay
Test requirements	<i>Specimen type:</i> CSF Minimum volume: 1 mL Preferred volume: 2 mL <i>Other rejection criteria:</i> CSF thawed upon arrival Samples must be received with a completed lab requisition with, at minimum, patient information (name, DOB, provincial health care number), ordering physician, and requesting laboratory information.
Specimen collection	No patient preparation is required for sample collection. <i>CSF collection tubes:</i> For CSF, use 63.614.625 Sarstedt tubes. Draw CSF in a minimum of 2 collection tube(s) enough for a minimum of 1.5 mL of CSF in each tube.
Specimen handling	Aliquot (before freezing) into multiple 5 mL Sarstedt tubes. Freeze immediately after aliquoting (-80°C preferred). Avoid freeze-thaw cycles or multiple tube transfers.
Specimen stability	CSF samples <u>must</u> be stored after collection at -80°C, preferentially for a minimum of 1 hour. Samples should stay frozen until transported and shipped on dry ice.
Testing frequency	Once a week
Turnaround time	14 days
Additional Information	Samples will be sent to Neurocode USA (CLIA#: 50D2158817) for testing.

Name of test	<i>Glial fibrillary acidic protein</i>
Abbreviations, alternate names	GFAP
Methodology	Lumipulse® assay
Test requirements	<i>Specimen type:</i> Plasma Minimum volume: 1 mL Preferred volume: 5 mL <i>Other rejection criteria:</i> Plasma thawed upon arrival Samples must be received with a completed lab requisition with, at minimum, patient information (name, DOB, provincial health care number), ordering physician, and requesting laboratory information.
Specimen collection	No patient preparation is required for sample collection. <i>Blood collection tubes:</i> Plasma, use K2 EDTA lavender-top vacutainer tubes. Draw blood in collection tube(s) enough for a total of 1 to 5 mL plasma.
Specimen handling	Spin collection tubes, pool plasma (if necessary) and store refrigerated. Plasma samples may be stored after collection at 2 to 8°C but must be stored at -80°C if the sample will not be shipped immediately.
Specimen stability	Plasma samples stored at 2 to 8°C must be received at the laboratory within 48 hours of collection. If batch shipping, samples must be frozen (-80°C preferred) and shipped on dry ice. Samples should stay frozen until transport.
Testing frequency	Once a week
Turnaround time	8 days
Additional Information	Samples will be sent to Neurocode USA (CLIA#: 50D2158817) for testing.

Name of test	<i>Phosphorylated-tau-217/β-Amyloid 1-42 Ratio</i>
Abbreviations, alternate names	p-tau217/Aβ42 ratio
Methodology	Lumipulse® assay
Test requirements	<i>Specimen type:</i> Plasma Minimum volume: 1.5 mL Preferred volume: 5 mL <i>Other rejection criteria:</i> Plasma thawed upon arrival Samples must be received with a completed lab requisition with, at minimum, patient information (name, DOB, provincial health care number), ordering physician, and requesting laboratory information.
Specimen collection	No patient preparation is required for sample collection. <i>Blood collection tubes:</i> Plasma, use K2 EDTA lavender-top vacutainer tubes. Draw blood in collection tube(s) enough for a total of 1 to 5 mL plasma.
Specimen handling	Specimen must be collected, processed, aliquoted, and frozen within 30 minutes of collection. Centrifuge and aliquot plasma into a transport tube.
Specimen stability	Store frozen at < -80°C and ship on dry ice. Do not allow the sample to thaw during transit.
Testing frequency	Once a week
Turnaround time	8 days
Additional Information:	<i>For research use only</i> Samples will be sent to Neurocode USA (CLIA#: 50D2158817) for testing.

Name of test	CSF Panel 4 Biomarkers (Aβ 42/40 Ratio, pTau181, tTau)
Abbreviations, alternate names	Panel 4 Biomarkers
Methodology	Lumipulse® assay
Test requirements	<i>Specimen type: CSF</i> Minimum volume: 1 mL Preferred volume: 2 mL <i>Other rejection criteria:</i> CSF thawed upon arrival Samples must be received with a completed lab requisition with, at minimum, patient information (name, DOB, provincial health care number), ordering physician, and requesting laboratory information.
Specimen collection	No patient preparation is required for sample collection. <i>CSF collection tubes:</i> For CSF, use 63.614.625 Sarstedt tubes. Draw CSF in a minimum of 2 collection tube(s) enough for a minimum of 1.5 mL of CSF in each tube.
Specimen handling	Aliquot (before freezing) into multiple 5 mL Sarstedt tubes. Freeze immediately after aliquoting (-80°C preferred). Avoid freeze-thaw cycles or multiple tube transfers.
Specimen stability	CSF samples <u>must</u> be stored after collection at -80°C, preferentially for a minimum of 1 hour. Samples should stay frozen until transported and shipped on dry ice.
Testing frequency	Once a week
Turnaround time	14 days
Additional Information:	<i>For research use only</i> Samples will be sent to Neurocode USA (CLIA#: 50D2158817) for testing.

Name of test	CSF Panel 5 Biomarkers (Aβ 42/40 Ratio, NfL, pTau181, tTau)
Abbreviations, alternate names	Panel 5 Biomarkers
Methodology	Lumipulse® assay
Test requirements	<i>Specimen type: CSF</i> Minimum volume: 1.5 mL Preferred volume: 3 mL <i>Other rejection criteria:</i> CSF thawed upon arrival Samples must be received with a completed lab requisition with, at minimum, patient information (name, DOB, provincial health care number), ordering physician, and requesting laboratory information.
Specimen collection	No patient preparation is required for sample collection. <i>CSF collection tubes:</i> For CSF, use 63.614.625 Sarstedt tubes. Draw CSF in a minimum of 2 collection tube(s) enough for a minimum of 1.5 mL of CSF in each tube.
Specimen handling	Aliquot (before freezing) into multiple 5 mL Sarstedt tubes. Freeze immediately after aliquoting (-80°C preferred). Avoid freeze-thaw cycles or multiple tube transfers.
Specimen stability	CSF samples <u>must</u> be stored after collection at -80°C, preferentially for a minimum of 1 hour. Samples should stay frozen until transported and shipped on dry ice.
Testing frequency	Once a week
Turnaround time	14 days
Additional Information:	<i>For research use only</i> Samples will be sent to Neurocode USA (CLIA#: 50D2158817) for testing.

Name of test	<i>Low-density lipoprotein receptor-related protein 4 antibodies</i>
Abbreviations, alternate names	LRP4 Ab
Methodology	In-house fixed cell-based assay (CBA)
Test requirements	<i>Specimen type:</i> Serum Minimum volume: 1 mL Preferred volume: 5 mL <i>Other rejection criteria:</i> none Samples must be received with a completed lab requisition with, at minimum, patient information (name, DOB, provincial health care number), ordering physician, and requesting laboratory information.
Specimen collection	No patient preparation is required for sample collection. Draw blood in tube(s) with SST activator (gold-top) enough for a total of 1 to 5 mL serum.
Specimen handling	Spin SST tube(s), pool serum (if necessary), freeze, then batch for delivery on ice packs.
Specimen stability	Serum samples may be stored at 2 to 8°C for up to 1 week or stored at –20°C for longer periods of time (months)
Testing frequency	Once every two weeks
Turnaround time	21 days
Additional Information:	<i>For research use only</i>