

Insurer	Insurance ID	Date of Collection	Sampling Time

Topelex

Patient's date of birth	Patient (Surname, Family name)	Sex

**Laboratory for CSF, Neuroimmunology,
Pathology & Special Diagnostics**

Diagnosis	Phone	Fax/Email

Clinical summary, comments

Ordering Physician ID (Name, hospital, phone)

CSF ☐ Lumbar ☐ Ventricular ☐ Puncture ☐ Drainage

For complete diagnostics, please provide samples of 15ml CSF and 15ml of blood

Note : S-blood sample, CSF - cerebrospinal fluid sample

Basic CSF Diagnostics

[CSF 1ml + S 1ml]

☐ **Cytology**

[CSF 2ml]

Total cell count, evaluation of microscope slides, cytochemical, immunocytochemical identification of elements (tumor cells, microorganisms)

☐ Total protein

☐ Glucose

☐ Lactate

Flow cytometry of CSF

[CSF 3ml]

☐ Basic lymphocyte subpopulations and B-Lymphocyte panel (diff. dg. inflammations, B-cell lymphoma of the CNS)

☐ **Spectrophotometry**

[CSF]

☐ **CSF Leak**

[CSF + S]

(beta trace protein)

☐ **Advanced CSF Diagnostics**

[CSF 3ml + S 1ml]

☐ FLC kappa

☐ FLC lambda

☐ **Isoelectric Focusing (oligoclonal bands)**

☐ Immunoglobulins, Blood-CSF, Barrier Functions

☐ Albumin ☐ IgG ☐ IgM ☐ IgA

☐ o-IgG

☐ o-IgM

☐ o-IgA

☐ o-FLC kappa

☐ o-FLC lambda

☐ **Special CSF Diagnostics**

[CSF + S á 2,5 ml]

☐ **Inflammatory markers**

☐ IL-1 ☐ IL-6 ☐ IL-8 ☐ IL-10 ☐ TNF alfa ☐ CXCL13
☐ Orosomucoid (AAG) ☐ beta-2-microglobulin (BMG)
☐ Haptoglobin ☐ Transferrin ☐ Prealbumin ☐ CRP

☐ **Destructive markers and neurodegenerative markers**

☐ S 100 [CSF/] ☐ NSE ☐ Apolipoprotein A1

Differential diagnostics of Alzheimer's disease [CSF 0,5 ml]

☐ h-Tau/p-Tau, Amyloid Beta 1-40/1-42*

☐ Neurofilaments pNF-H [CSF]

☐ Neurofilaments pNF-H sensitive assay [Serum 0,5 ml]

(Note: * Please use polypropylene sample tubes.)

Neurotropic infectious agents: PCR detection

[CSF 1ml = 1-4 pathogens]

- ☐ PCR Bacterial Meningitis Panel I.
(N. meningitidis, H. influenzae, St. pneumoniae) **
☐ PCR Bacterial Meningitis Panel II.
(Staphylococcus sp., Streptococcus sp., Enterobacteriaceae)**
☐ PCR MRSA screen (Methicillin resistant - S. aureus)
☐ PCR Mycotic panel
(Aspergillus sp., Candida sp., Cryptococcus neoformans)**
☐ PCR Chlamydia and Mycoplasma pneumoniae
☐ PCR Anaplasma phagocytophilum (ehrlichiosis)
☐ PCR Borrelia burgdorferi s.l.
☐ PCR TBEV (Tick-borne encephalitis virus)
☐ PCR West Nile virus (WNV)
☐ PCR Herpes simplex virus 1,2 (HSV 1,2)
☐ PCR Varicella zoster virus (VZV)
☐ PCR Cytomegalovirus (CMV)
☐ PCR Epstein-Barr virus (EBV)
☐ PCR Human herpesvirus 6,7 (HHV 6,7)
☐ PCR Enteroviruses
☐ PCR JCV
☐ PCR Mycobacterium tuberculosis (TBC)
☐ PCR Leptospira interrogans
☐ PCR Listeria monocytogenes
☐ PCR Toxoplasma gondii
☐ PCR Mumps virus
☐ PCR Morbillivirus
☐ PCR Treponema pallidum
☐ PCR SARS-CoV-2 (Covid 19)

** PCR test is only one method out of the set of examination methods, it does not replace a cultivation test.

Neuroimmunological Diagnostics

[S 1ml, event + CSF 2ml]

Preferred detection in blood, in CSF upon request.

☐ CSF ☐ S

☐ **Autoantibodies incl. onconeural (paraneoplastic)**

☐ Anti-Yo, Hu, Ri, Ma1, PNMA2Ma2/Ta
CV2, Amphiphysin, Titin, SOX, GAD, Tr
Zic4, Recoverin, PKC Y

☐ Anti-GAD (quantitative detection)

☐ Anti-Aquaporin4, Anti-MOG

☐ Anti-MAG, Anti-MBP

☐ Antiganglioside autoantibodies:
(GM1/2/3/4, GD1a/1b/2/3, GT1a/1b,
GQ1b)

☐ **Neural membrane/ receptor autoantibodies- AE-LE set [CSF+S]**

☐ Anti-AMPA 1/2, Anti-GABABR

☐ Anti-NMDAR

☐ Anti-VGKC (LGI-1/caspr 2)

(incl. titrations in case of a positive finding)

☐ Anti-DPPX

☐ **Autoantibodies in neuromuscular transmission disorders**

☐ Anti-Titin, Anti-SOX1

☐ Anti-AChR

☐ Anti-MuSK

Neurotropic infectious agents: Antibody

detection including detection of intrathecal antibody synthesis

[one pathogen á 1ml CSF+S]

☐ **Boreliosis**

Borrelia burgdorferi s.l. (IgG/M+WB)

☐ **Herpetic viruses**

HSV 1/2 (IgG/M ELISA+WB)

VSV (IgG/M ELISA)

EBV (VCA IgG/M+WB)

CMV (IgG/M+WB)

In case of acute neuroinfections, PCR should be performed

☐ **HIV [S]**

HIV 1/2, p24Ag

☐ **Encephalitis**

TBEV (IgG/M ELISA)

☐ **Neuroleues**

Treponema pallidum (IgG/M+WB)

☐ **Toxoplasmosis**

Toxoplasma gondii (IgG/M)

☐ **Other microbial agents**

Chlamydia pneumoniae (IgG/M/A ELISA+WB)

Mycoplasma pneumoniae (IgG/M/A)

☐ **SARS-CoV-2**

Anti-SARS-CoV-2 IgG, IgA, AI CSF

☐ **MRZ reaction** [CSF+S á 0,5ml]

Further specifications, requirements