



Guidelines for the collection, pre-treatment, shipment and storage of cerebrospinal fluid (CSF) for biomarker analysis (14-3-3 γ protein Immunoblot, β -amyloid protein, total tau protein, hyperphosphorylated tau ELISA).

Please inform your patients that the cost for these analyses is **€50 for the 14-3-3 γ protein Immunoblot and/or €165 for the β -amyloid protein, total tau protein, hyperphosphorylated tau ELISA**, which is not covered by the regular Belgian insurance companies (refunding is however provided by some supplementary hospitalization insurances).

1. CSF collection

- Lumbar puncture at level L3/L4 or L4/L5
- Collect at least 2 ml CSF in a **polypropylene** tube
- Label tube

2. CSF pre-treatment in case a macroscopically hemorrhagic CSF (within 4h after LP)

- Centrifuge CSF to exclude cells for 10 min at 3000 rpm.
- Transfer supernatant to unused polypropylene tube.

3. Shipment to lab for biomarker analyses

Always include the IBB Biomarker request sheet which includes an informed consent (informing the patient he/she will receive an account for these analyses) when sending samples!

- **Unfrozen, within 60h after lumbar puncture:**
 - Packages sent by courier at 4 °C are highly recommended!
 - Regular postal services must be avoided (no 4 °C shipments guaranteed); in any case never send with regular postal services on a Thursday afternoon or on a Friday to avoid 'next week' arrivals.
- **Frozen, if not sent within 60h after lumbar puncture:**
 - Store CSF tubes at -20 °C or lower until shipment.
 - Packages must be sent by courier on dry ice (-80 °C), thawing must be avoided.

4. Arrival, storage and analysis at lab

- On arrival **all samples will be registered** in the IBB-database.
- Samples will be stored until a batch of min. 8 samples (for Immunoblot) or 35 samples (for ELISA) is available for analyses.
- **Results will be sent** to the corresponding doctor and to the clinical lab of the hospital (reply **within 2.5 weeks** after sample arrival **for the 14-3-3 γ Immunoblot** analyses; **within 8 weeks** after sample arrival **for the β -amyloid protein, total tau protein, hyperphosphorylated tau ELISA** analyses).

CSF samples for **ELISA** analyses to be sent to:

Ref. Centre for Biological Markers of Memory Disorders
Prof. Dr. P.P. De Deyn & Prof. Dr. S. Engelborghs
Universiteitsplein 1, Building T Room 5.20
BE-2610 Antwerp, Belgium
Tel. +32 3 820 23 94 (Prof. Dr. S. Engelborghs)
Tel laboratory: +32 3 820 26 31 - Fax: +32 3 820 26 18

CSF samples for **Immunoblot** analyses to be sent to:

Laboratory of Neurobiology
Prof. Dr. P. Cras
Universiteitsplein 1, Building T Room 5.20
BE-2610 Antwerp, Belgium
Tel. +32 3 820 26 04 (Prof. Dr. P. Cras)
Tel laboratory: +32 3 820 26 05 - Fax: +32 3 820 26 69