

CSF 14-3-3 and CSF S100 (BASILDON HOSPITAL ONLY)

For Southend – please contact the Microbiologist

Synonyms

CJD, CJD protein, brain specific proteins

Clinical Indication

For the investigation of neurodegenerative disorders.

14-3-3 is a normal neuronal protein and is released into the CSF in response to a variety of neuronal insults. It is a non-specific finding and 14-3-3 analysis cannot be used as a screening test for sporadic CJD. Other illnesses, which can give a positive 14-3-3 test, include:

- Herpes simplex encephalitis and other viral encephalitides.
- Recent cerebral infarction or haemorrhage.
- Subarachnoid haemorrhage.
- Hypoxic brain damage.
- Glioblastoma
- Carcinomatous meningitis.
- Paraneoplastic encephalopathy.

However, it is usually a straightforward clinical matter to exclude the other possible illnesses which may give rise to an elevated 14-3-3 level. Therefore, in an appropriate clinical context, a positive test is strongly supportive of a diagnosis of sporadic CJD and a negative test is unusual.

CSF S100 is analysed in addition to CSF 14-3-3 on all specimens.

Part of Profile / See Also

Request Form

Combined Pathology manual Blood form or ICE request

Availability / Frequency of Analysis

Referral test: analysed by National Creutzfeldt-Jakob Disease Surveillance Unit, Western General Hospital, Edinburgh, if specific criteria met. Discuss with Alison Green on 0131 537 1980 / Alison.green39@nhs.net before taking sample or ASAP after taking a sample. Samples will not be sent unless they have been discussed and agreed with the clinical team at the National CJD Surveillance Unit. Useful forms:

[CSF S100 referred to the National Hospital 8045](#)

<http://www.cjd.ed.ac.uk/sites/default/files/collectionandstorage.pdf>

<http://www.cjd.ed.ac.uk/sites/default/files/labcontainmentandcontrol.pdf>

Turnaround Time

1 week

Patient Preparation

Sample Requirements

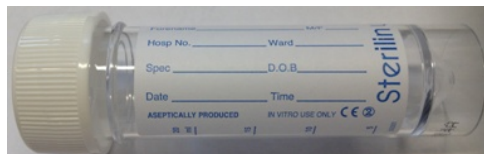
Specimen Type

CSF

Volume

Minimum 1.0 mL

Container



White Capped Universal

Samples must be transported to laboratory immediately

Reference Range & Units

Interferences

Interpretation & Clinical

Decision Value (if applicable)

The detection of 14-3-3 in the CSF has been reported to have a positive predictive value of 93% and a negative predictive value of 92% for the diagnosis of sporadic CJD, but false positives and false negatives can occur in certain circumstances. S-100b concentrations in the CSF have also been reported to be elevated in cases of sporadic CJD. CSF 14-4-3 is only detected in 50% of vCJD cases. As with all tests, results must be interpreted in the particular clinical context and all cases can be discussed with the CJD surveillance team.

<http://www.cjd.ed.ac.uk/sites/default/files/investigations.pdf>

<http://www.cjd.ed.ac.uk/csf-laboratory-1>

References

Test code

SAS

Lab Handling

Samples must be centrifuged and frozen at -80°C (Clinical Trials freezer) within 2 hours of collection. Please inform the referral team that a sample has been sent and where it has been stored. Referral team will only send the sample once the clinician has discussed and agreed the request with the clinical team at the CJD Surveillance Unit. CJD Unit arrange the courier for the sample to be transported to Edinburgh.

Infection control must be informed by the laboratory if a patient has had a sample sent to the National CJD Surveillance Unit in Edinburgh for testing.



8045

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ISO 15189:2022**