

# Beta-2 transferrin

Beta-2 transferrin is a carbohydrate-free (desialated) isoform of [transferrin](#), which is almost exclusively found in the [cerebrospinal fluid](#). It is not found in blood, mucus or tears, thus making it a specific marker of [cerebrospinal fluid](#), applied as an assay in cases where [Cerebrospinal fluid fistula](#) is suspected.

Beta-2 transferrin would also be positive in patients with perilymph fluid leaks, as it is also present in inner ear perilymph. Thus, beta-2 transferrin in [otorrhea](#) would be suggestive of either a Cerebrospinal fluid fistula or a perilymph leak.

The effect of time and temperature on [beta-2 transferrin](#) stability in [cerebrospinal fluid](#) (CSF) is not well established. After collecting nasal CSF for testing, beta-2 transferrin has been found to be stable and detectable for 1 week, whether being refrigerated or stored at room temperature. The purpose of a study was to determine if beta-2 transferrin remained detectable longer than 1 week and whether refrigeration improved its detectability.

In patients undergoing therapeutic CSF diversion, 2-mL CSF samples were collected from 18 patients. The samples were divided and stored either at room temperature, or at 4°C, and tested for beta-2 transferrin at 7 and 14 days. CSF was collected from external ventricular drains (EVDs) (n = 15), lumbar drains (n = 2), and subdural drains (n = 1).

Of the 18 CSF samples originally testing positive for beta-2 transferrin, none turned negative at 7 or 14 days, in both the refrigerated and room temperature groups (95% confidence interval [CI], 0% to 18.5%).

Beta-2 transferrin remained detectable for 14 days in all CSF samples, regardless of being stored at 4°C or room temperature <sup>1)</sup>.

<sup>1)</sup>

Zervos TM, Macki M, Cook B, Schultz LR, Rock JP, Craig JR. Beta-2 transferrin is detectable for 14 days whether refrigerated or stored at room temperature. Int Forum Allergy Rhinol. 2018 May 3. doi: 10.1002/alr.22136. [Epub ahead of print] PubMed PMID: 29722921.

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