**Data S1**

**Table S1.**

Excel file below (double click to activate) contains all basic data for this paper. Abbreviations: RRMS (relapsing-remitting MS), PPMS (primary-progressive MS), SPMS (secondary-progressive MS), CIS (clinically isolated syndrome), SC (symptomatic controls with normal or abnormal MRI), n (number of persons), CSF (cerebrospinal fluid), y (years), d (days), Gender (1=male; 2=female), OND (other neurological disease), OMD (other medical disease).



|  |
| --- |
| **Tabel S2: Proteins and their molecular weight** |
| **Characteristic** | **Molecular weight (kDa)** | **Ratio CSF/serum'10E-3** |
| Molecule |  |  |
| Apolipoprotein E | 33 | 60 |
| Orosomucoid | 40 | 5.3 |
| alfa1 antichymotrypsin | 43 | 4.4 |
| C-reaktivt protein | 50 | 3.2 |
| soluble CD14 | 52 | 50 |
| alfa1 antitrypsin | 54 | 4.3 |
| Hemopexin | 57 | 3.4 |
| Transthyretin | 60 | 70 |
| Albumin | 66 | 4 |
| Transferrin | 81 | 7 |
| Plasminogen | 90 | 1.6 |
| soluble CD163 | 130 | 20 |
| Coeruloplasmin | 151 | 2.3 |
| IgA | 160 | 0.7 |
| IgG | 160 | 1.9 |
| Fibrinogen | 340 | 0.22 |
| Ferritin | 480 | 10 |
| Table S2 lists proteins, their respective molecular weight and ratio CSF/serum. The table is adapted from Nockher et al (22). Abbreviations: kDA (kilo Dalton) |



Figure S1. Distribution of proteins and their CSF/serum ratios plotted against their molecular weight (in kD). This figure is adapted from Nockher et al (22). Proteins marked with (●) originate solely from the blood compartment (see appendix table 2 below) and proteins marked by (o) are suspected to be produced intrathecally.

**Appendix calculations:**

**Calculation of intrathecal synthesis**

The % of intrathecally produced sCD163 was calculated as follows (14):

The sCD163 produced intrathecally was calculated by this formula: serum sCD163 x (CSF/serum albumin ratio) subtracted from the absolute CSF concentration. The result is presented as a percentage of the absolute CSF concentration.

**Calculation of ratio and index**

All ratios (i.e.sCD163 and albumin ratio) were derived by simply dividing the CSF concentration by the serum concentration.

The sCD163 index was calculated by dividing sCD163 ratio by albumin ratio.

**Results from the regression analyses in STATA:**

Analyses are performed on log-transformed data (i.e. lSerum). This type of analysis is described thoroughly in the STATA journal [23]. Groups in the regression analyses: 1=RRMS; 2=PPMS; 2=CIS; 4=SPMS.

**Table S3**



Table S3 shows the output of our regression analysis on log transformed

sCD163 serum values (lSerum)

**Table S4**



Table S shows the output of our regression analysis on log transformed

sCD163 CSF values (lcsv)

**Table S5**



Table S5 shows the output of our regression analysis on log transformed

scd163 CSF/serum values (lRatio)

**Table S6**



Table S3 shows the output of our regression analysis on log transformed

sCD163 index values (lIndex)

All references in Data S1 are given in the article.

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