

Supplementary Material

Phosphatidylethanolamine Binding Protein 1 (PEBP1) in Alzheimer's Disease: ELISA Development and Clinical Validation

Supplementary Table 1. Main characteristics of the patients. Values for age and biomarkers are defined as a mean value \pm SD.

1st validation	OND	MCI-AD
Gender (female/male)	5/6	7/7
Age	67 \pm 9.9	68 \pm 6.1
A β ₄₀ (pg/mL)	10907 \pm 5061	11173 \pm 3912
A β ₄₂ /A β ₄₀ (pg/mL)	0.111 \pm 0.024	0.051 \pm 0.010
A β ₄₂ (pg/mL)	1139 \pm 434	568 \pm 230
total tau (pg/mL)	277.10 \pm 62.77	805.89 \pm 244.23
p-tau (pg/mL)	45.29 \pm 9.34	102.02 \pm 27.38

2nd validation	OND	MCI-AD	AD-dem
Gender (female/male)	10/11	14/11	21/8
Age	56 \pm 15.7	73 \pm 5.5	74 \pm 6.7
A β ₄₀ (pg/mL)	12190 \pm 4344	13612 \pm 3905	12238 \pm 4094
A β ₄₂ /A β ₄₀ (pg/mL)	0.106 \pm 0.016	0.047 \pm 0.0136	0.053 \pm 0.011
A β ₄₂ (pg/mL)	1292 \pm 479	663 \pm 275	636 \pm 250
total tau (pg/mL)	278.25 \pm 120.78	699.24 \pm 214.01	827.03 \pm 322.75
p-tau (pg/mL)	41.22 \pm 15.71	96.13 \pm 32.59	108.23 \pm 54.80

Supplementary Table 2. Capture and detection antibody pairs tested for the best performance.

No.	Capture antibody	Detection antibody
1.	HPA063904	sc-376925
2.	HPA063904	372100
3.	sc-376925	HPA063904
4.	sc-376925	372100
5.	372100	HPA063904
6.	372100	sc-376925

Supplementary Table 3. Standard curve development – exemplary result.

Sample	Concentration (ng/ml)	log (concentration)	OD1	OD1 blank subtracted	OD2	OD2 blank subtracted	Mean OD	SD	CV	CV%
Standard 1	100	2.000	1.479	1.479	1.527	1.527	1.503	0.034	0.023	2.26
Standard 2	50	1.699	0.855	0.855	0.860	0.860	0.858	0.004	0.004	0.41
Standard 3	25	1.398	0.487	0.487	0.500	0.500	0.494	0.009	0.019	1.86
Standard 4	12.5	1.097	0.309	0.309	0.308	0.308	0.309	0.001	0.002	0.23
Standard 5	6.25	0.796	0.212	0.212	0.211	0.211	0.212	0.001	0.003	0.33
Standard 6	3.13	0.496	0.163	0.163	0.162	0.162	0.163	0.001	0.004	0.44
Standard 7	1.57	0.196	0.133	0.133	0.132	0.132	0.133	0.001	0.005	0.53
Blank	n/a	n/a	0.105	n/a	0.111	n/a	0.108	0.004	0.039	3.93

Supplementary Figure 1. CSF PEBP1 mean concentration change (%) following subsequent freeze-thaw cycles.

