

Clinical Usefulness of a Cell-based Assay for Detecting Myelin Oligodendrocyte Glycoprotein Antibodies in Central Nervous System Inflammatory Disorders

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Supplemental Data Table S1. Cell-based indirect immunofluorescence assay score

CBA score	Description
0	No staining occurred in the cell membrane.
0.5+	Weak staining occurred in the cell membrane, but the entire membrane was not stained.
1+	Clear but weak staining occurred in the entire cell membrane.
2+	The entire membrane was clearly stained and moderately bright.
3+	Clear and brilliant staining occurred with a brightness similar to that of the positive control.
4+	Very bright staining was observed that was stronger than the positive control.

Abbreviation: CBA, cell-based assay

Supplemental Data Table S2. Results of MOG-Ab testing in two different laboratories*

		Results obtained with the MOG-Ab CBA developed in this study		
		Positive	Negative	Sum
Results obtained with the Oxford MOG-Ab CBA	Positive	8	0	8
	Negative	2	156	158
	Sum	10	156	166

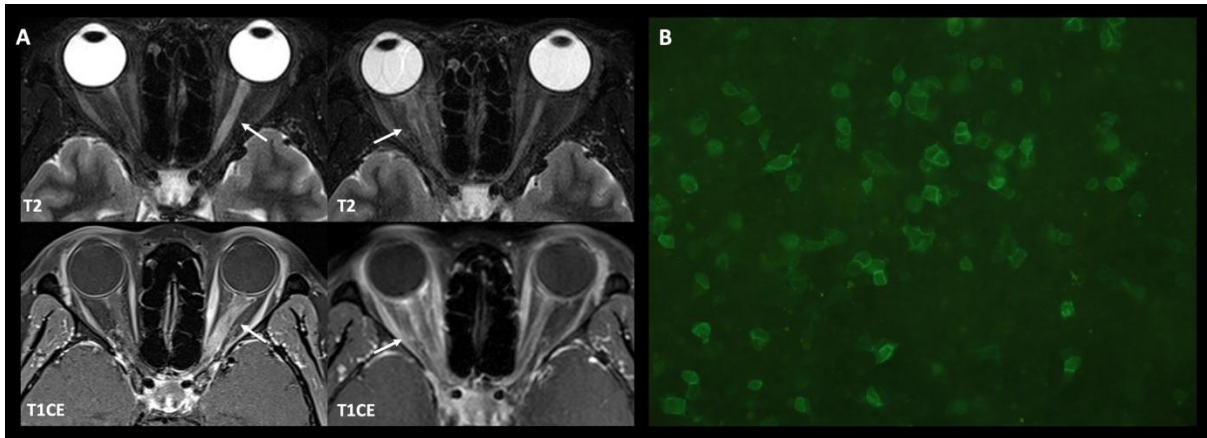
*The kappa value of the CBAs from both laboratories was 0.883 ($P < 0.001$).

Abbreviations: MOG-Ab, myelin oligodendrocyte glycoprotein autoantibody; CBA, cell-based assay

Supplemental Data Table S3. Incongruent or unusual cases with positivity for MOG-Abs

No.	Oxford case	In- house MOG- Ab CBA CBA	Commercial MOG-Ab CBA kit	Sex	Age at sampling	AQP4- Ab	Clinical diagnosis	Involved area	Total number of relapses	Preventive treatment
#1	Negative	Positive	Positive	F	54	Negative	TM	Recurrent TM	2	Azathioprine
#2	Negative	Positive	Positive	M	48	Negative	ODD	BS, cauda equina syndrome	2	None
#3	Positive	Positive	Negative	M	34	Negative	ON	Bilateral ON	1	Oral steroid
#4	Positive	Positive	Positive	F	21	Positive	ON	Recurrent ON	5	Satralizumab

Abbreviations: MOG-Ab, myelin oligodendrocyte glycoprotein autoantibody; CBA, cell-based assay; AQP4-Ab, aquaporin-4 autoantibody; F, female; TM, transverse myelitis; M, male; ODD, other demyelinating disease; BS, brainstem; ON, optic neuritis



Supplemental Data Figure S1. An example case of a patient with MOG-Abs. A 53-yr-old woman with recurrent optic neuritis was referred to our center for further evaluation. She had experienced four clinical events of optic neuritis in both eyes. (A) Brain magnetic resonance imaging showed high T2 signal intensities with enhancement in the left optic nerve (left upper and lower panels, at onset) and right optic nerve (right upper and lower panels, at the second relapse, occurring 2 yrs after onset). (B) Our in-house MOG-Ab CBA revealed a positive result (CBA score = 4+).

Abbreviations: MOG-Abs, myelin oligodendrocyte glycoprotein autoantibodies; CBA, cell-based assay.