**Seizure-related 6 homolog like 2 (SEZ6L2) autoimmunity: Neurologic syndrome and antibody effects**

**Supplemental material**

1. Table 1S
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**Table 1S. Cerebellar ataxia and antibodies against neuronal surface antigens**

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| Antibody | Distinctive clinical features | Cancer | Improvement with immunotherapy |
| VGCC1 | Association with LEMS | SCLC | 1/11 (9%) |
| mGluR12 | Occasional association with dysgeusia, head titubation or orthostatic myoclonus | 7/20(35%), mostly lymphoma | 12/19 (63%)  |
| mGluR23 | 2 patients reported. One with acute cerebellitis. Another with relapsing ataxic episodes | Sarcoma, SCC | 1 patient  |
| Septin54 | 4 patients reported. Prominent oscillopsia in 2 and vertigo in 1 at onset | No | 2/3 patients  |
| SEZ6L25 | Mild cognitive impairment, parkinsonism | No | 1/6 patients  |

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**Figure 1S. SEZ6L2-ab do not decrease GluA1 clusters on neuronal surface.**

A) Immunofluorescence on hippocampal neurons treated for 72 hours with control or patient CSF with SEZ6L2-ab. SEZ6L2-ab did not affect the surface cluster density of SEZ6L2, GluA1 or its degree of colocalization. Scale bar=5 μm. Quantification of total (B) and synaptic (D) GluA1 and PSD95 clusters (C), and colocalization analysis between SEZ6L2 and GluA1 (E) after treatment with SEZ6L2-ab-positive or control CSF for 72h.

**References**

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