

**Cell Reports Medicine, Volume 3**

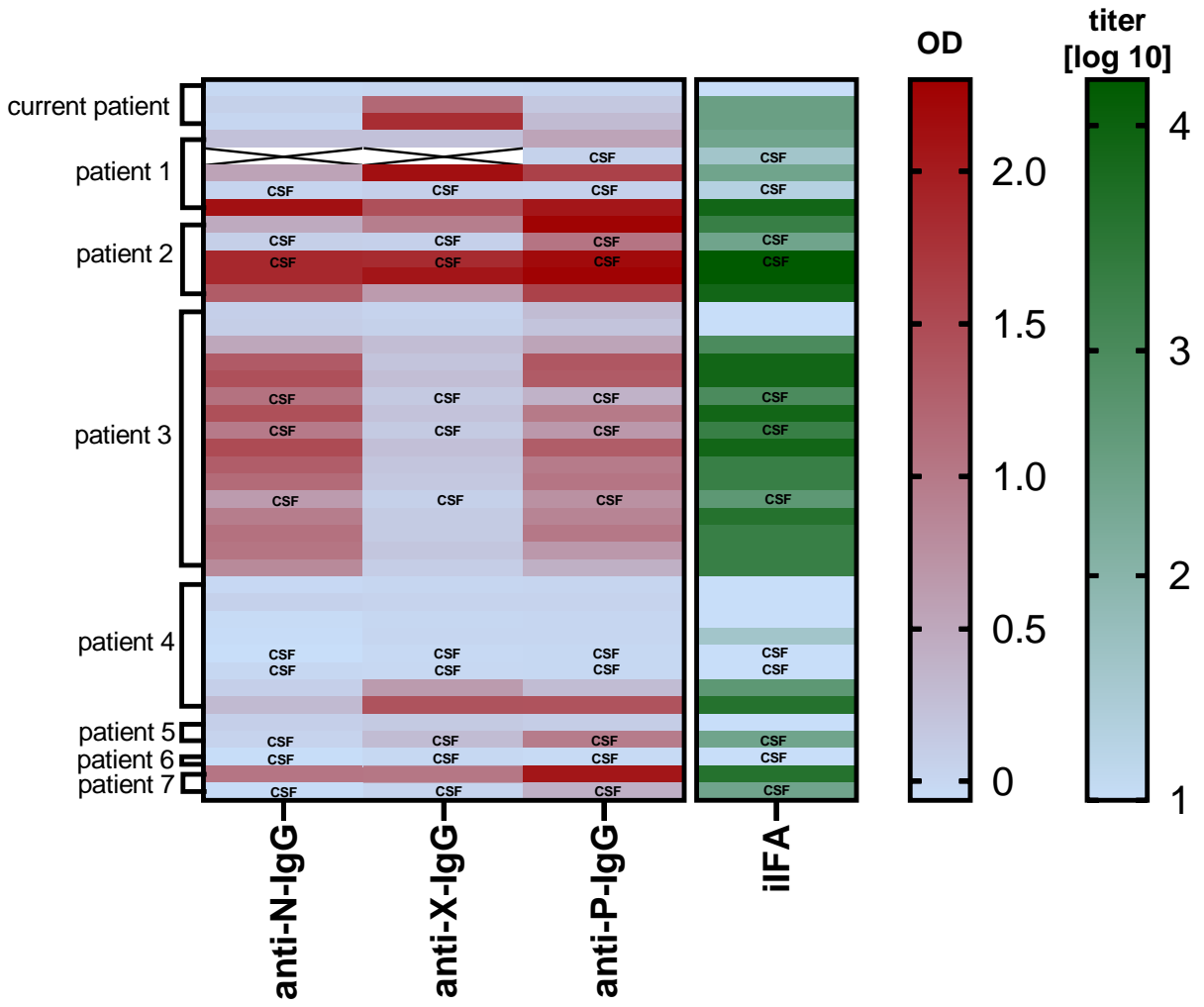
**Supplemental information**

**Antibodies against viral nucleo-, phospho-,  
and X protein contribute to serological diagnosis  
of fatal Borna disease virus 1 infections**

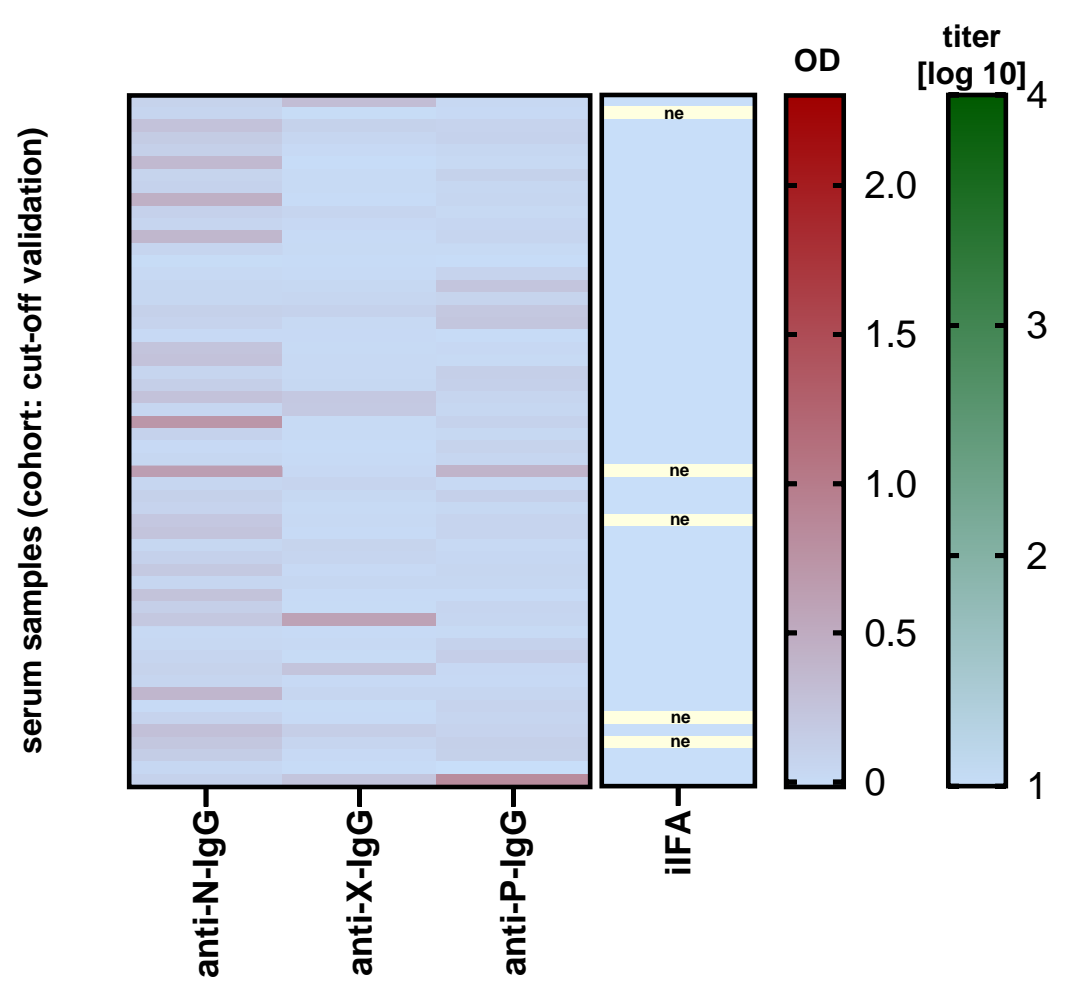
**Bernhard Neumann, Klemens Angstwurm, Ralf A. Linker, Gertrud Knoll, Lisa Eidenschink, Dennis Rubbenstroth, Kore Schlottau, Martin Beer, Patrick Schreiner, Erwin Soutschek, Merle M. Böhmer, Benedikt M.J. Lampl, Matthias Pregler, Alexander Scheiter, Katja Evert, Saida Zoubaa, Markus J. Riemenschneider, Benedikt Asbach, André Gessner, Hans Helmut Niller, Barbara Schmidt, and Markus Bauswein**

# Supplemental Figure S1

**A**



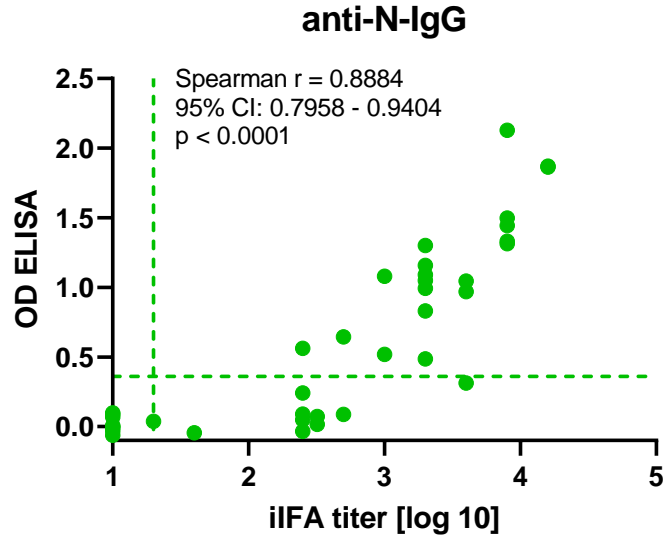
**B**



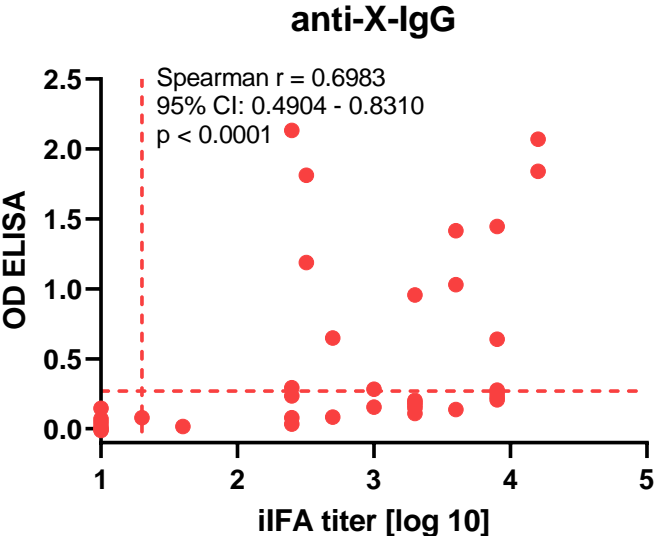
**Supplemental Figure S1. Benchmarking of BoDV-1 IgG ELISA against indirect immunofluorescence assay (iIFA).** Related to Figure 3. **(A)** Comparison of BoDV-1 ELISA and iIFA for 41 consecutive samples (serum, plasma, CSF) of 8 confirmed BoDV-1 infected patients. ELISA results are expressed as optical density (OD), iIFA results are expressed as log<sub>10</sub>-transformed titers. Cells with an X represent samples that could not be tested due to material constraints. **(B)** Serum/plasma samples of patients with suspected tick-borne encephalitis (cohort for cut-off validation) were tested by ELISA and iIFA. RT-qPCR from CSF of all patients was negative for BoDV-1. Columns represent OD from ELISA (anti-N-IgG, anti-X-IgG, anti-P-IgG) and log<sub>10</sub>-transformed titers from iIFA, rows represent independent samples (n = 56). Samples with a similar unspecific background staining pattern of uninfected and BoDV-1 infected Vero cells were defined as non-evaluable (ne). IIFA was evaluated separately from at least two different trained individuals.

Supplemental Figure S2

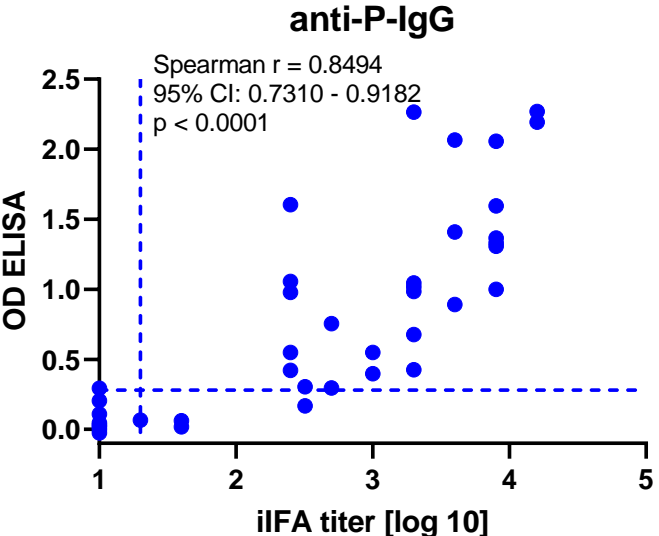
A



B

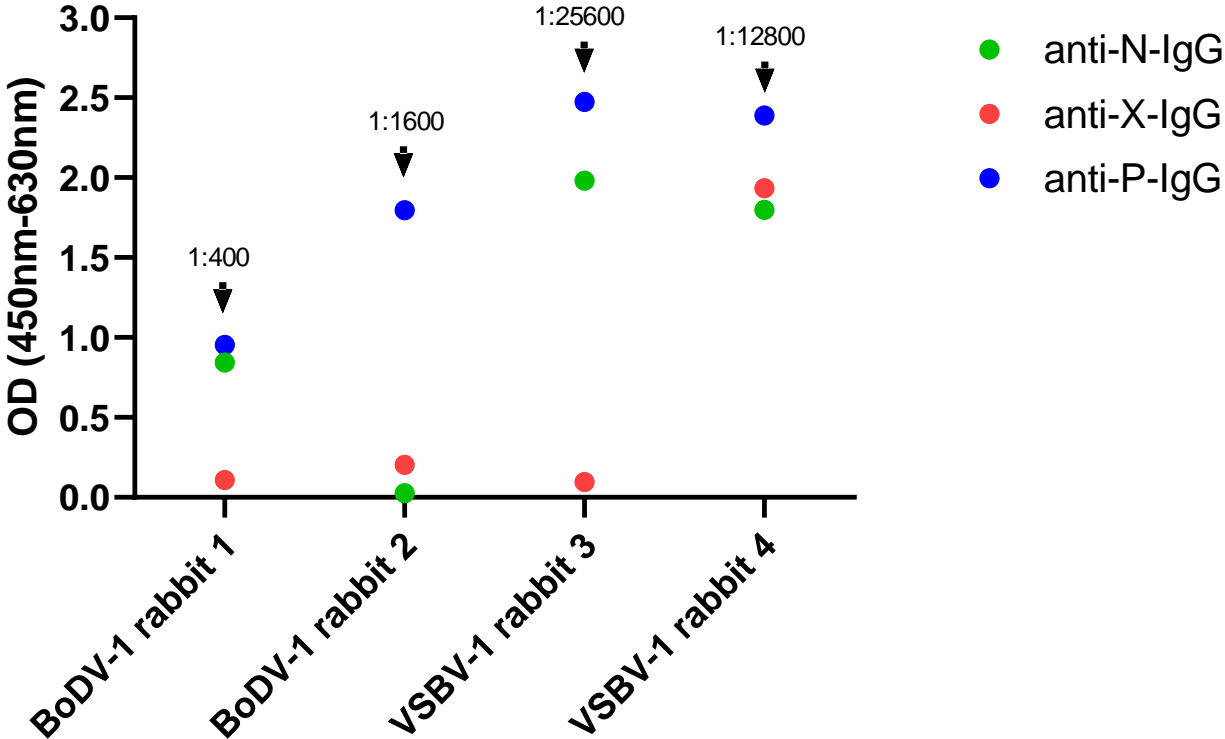


C



**Supplemental Figure S2. Correlation between indirect immunofluorescence assay (iIFA) titers and ELISA optical densities (OD).** Related to Figure 3. Serum/plasma and cerebrospinal fluid (CSF) samples ( $n = 42$ ) of 8 BoDV-1 infected patients were included in the analysis. X-axis shows log 10-transformed iIFA titers and y-axis ELISA OD, respectively. To test for correlation, a Spearman rank test was performed for anti-N-IgG (A), anti-X-IgG (B) and anti-P-IgG (C). Vertical and horizontal lines represent detection limit and cut-off for iIFA and ELISA, respectively. Samples that tested negative (titer  $< 20$ ) in iIFA were assigned to the titer 10 (1 after log 10 transformation).

### Cross-reactivity BoDV-1/VSBV-1 (rabbit samples)



**Supplemental Figure S3. Cross-reactivity of BoDV-1 ELISA with VSBV-1 antibodies.** Related to Results, Limitations of study and STAR Methods. Plasma samples of two BoDV-1 and two VSBV-1 infected rabbits were tested in the ELISA using the recombinant BoDV-1 N, X and P protein and a secondary anti-rabbit-IgG antibody. Y-axis shows optical density (OD). Arrows and black numbers represent corresponding iIFA titers. The data are representative of two independent ELISA experiments.