

## Supplementary materials

**Fig. S1. Amino acid sequence alignment of VP088 and its homologs.** Gaps (hyphens) were introduced to maximize alignment. Shown are a myristylation motif at the N-terminus (bold), putative transmembrane domains (TM; underlined) and *N*-glycosylation sites (box). Identical positions are highlighted. TFV, tiger frog virus; RGV, *Rana grylio* virus; ISKNV, infectious spleen and kidney necrosis virus; LCDV, lymphocystis disease virus.

**Fig. S2. DNA and deduced amino acid sequence of VP88GFP.** The initial codon ATG and stop codon of TGA are in bold. VP088 is in black color and GFP is in green color.

**Movie S1. Visualization of VAS dynamics.** 88GFP-HX1 cells at 48 hpi with SGIV were stained with Hoechst 33342 for time-lapse observation. Behaviors of nuclei plus viral DNA (blue) and VP88GFP (green) are shown during VAS formation and disappearance in the split channel.

**Table S1. Genes and primers used for RT-PCR analyses.**