

File name: Supplementary Movie 1

Description: Blue-light induces nuclear export of mTq2-optoNES in hippocampal neurons. See Supplementary Figure 5 for details.

File name: Supplementary Movie 2

Description: Blue-light induces nuclear export of YPET-optoNES in hippocampal neurons. Although this construct has a high initial cytoplasmic localisation, blue-light induced reduction of nuclear levels can still be observed, allowing quantification of light sensitivity. See Supplementary Figure 5 for details.

File name: Supplementary Movie 3

Description: Blue-light induces nuclear export of mScarlet-optoNES in hippocampal neurons. See Supplementary Figure 5 for details.

File name: Supplementary Movie 4

Description: Blue-light induces nuclear export of mTq2-spacer-optoNES in hippocampal neurons. See Supplementary Figure 5 for details.

File name: Supplementary Movie 5

Description: Blue-light induces nuclear export of YPET-spacer-optoNES in hippocampal neurons. See Supplementary Figure 5 for details.

File name: Supplementary Movie 6

Description: Blue-light induces nuclear export of mScarlet-spacer-optoNES in hippocampal neurons. See Supplementary Figure 5 for details.

File name: Supplementary Software

Description: This file includes a) ImageJ macro scripts used to quantify the responsiveness of optoNES constructs; b) An excel-based calculator to predict the dynamic adduct state of a LOV2 switch exposed to a defined illumination pattern, based on switch-specific parameters measured as described in the text.