The present dataset contains original data and metadata published in:

bioRxiv, 2022. doi: 10.1101/2022.04.12.488116

“Metadata.pdf” contains values of the reported in Figures 1-5 and in Supplementary Figures S3,S4,S6,S7,S8. It also contains the statistical analysis and tests performed in each type of experiment.

Data are contained in matlab files (.mat) named with the corresponding Figure (with panel or blocker when different experiments are presented in the same figure). Inside the files, each cell is a structure containing the following variables:

[Vm] **160X1 array**: somatic membrane potential (20 kHz) - control conditions.

[Vmb] **160X1 array**: somatic membrane potential (20 kHz) - after delivery of a blocker.

(In some cases, [Vmc] **160X1 array** - after delivery of a second blocker).

[avg] **30X128 array**: image of the recording area - control conditions.

[avgb] **30X128 array**: image of the recording area - after delivery of a blocker.

(In some cases, [avgc] **30X128 array** - after delivery of a second blocker).

[linesignal] **NX80 array**: fractional change of fluorescence (10 kHz) at position n - control conditions.

[linesignalb] **NX80 array**: fractional change of fluorescence (10 kHz) at position n - after delivery of a blocker.

(In some cases, [linesignalc] **NX80 array** - after delivery of a second blocker).

In [linesignal], the fractional change of fluorescence at position n is calculated first by averaging fluorescence over the dim1 and then by averaging along 5 µm along dim2 (30X128 is the original dimension). Before calculating the fractional change of fluorescence, raw fluorescence was corrected for bleaching at each position.

The name of the structure is <[sfx][”\_”][date\_of\_recording][letter] where:

* [sfx] is either “L5” (data acquired with the DaVinci2K camera, experiments performed by L Filipis) or “LAILA” (data acquired with the NeuroCCD camera, experiments performed by LA Blömer).
* [letter] is “a”, ”b”, ”c”,…indicating the cell recording in the date of recording.

For all details regarding this work, refer to the pre-print version of the report freely available at bioRxiv, 2022. doi: ???