SUPPLEMENTARY INFORMATION

BigDataViewer supporting the CLEM analyses

We provide the complete EM grids of three animals used in our CLEM analysis, as shown in Extended Data Fig. 9a-c. This data can be navigated as follows:

To visualize the CLEM data, we deposited the folder *BDV-Playground.zip* to Mendeley Data (doi: 10.17632/dgb8d7h2hz.1, https://data.mendeley.com/datasets/dgb8d7h2hz/1). When downloaded and unzipped, the folder contains three datasets, named *Tomo1-3*, *Tomo4* and *Tomo5*. These numbers relate to the tomogram numbers in Extended Data Fig. 9. To use the provided data, install the Fiji Plugin BDV-Playground (https://imagej.github.io/plugins/bdv/playground) by enabling the update site (https://biop.epfl.ch/Fiji-Bdv-Playground/). The provided data allow scrolling through the imaged regions in three dimensions. Note that the fluorescence overlays in these datasets has not been refined locally, and will not precisely recapitulate the results depicted in Fig. 6a-e.

To view a dataset (https://imagej.github.io/plugins/bdv/playground#open-a-bigdataviewer-xml-dataset), open the BDV-Playground main window [PluginsBigDataViewerPlaygroundShow Bdv Playground Window]. Then, drag all content from one of the dataset directories (*Tomo1-3*, *Tomo4* or *Tomo5*) onto that window. Right-click the top-most "Sources" entry and select "Show sources (new Bdv window)". Make sure that "Adjust View on Source" is selected. This positions the viewer onto the data. Also the "Projector" needs to be set to "Mixed Projector" so that both Fluorescence and EM data can be visualized. In the viewer, press "F1" to get a list of keyboard and mouse controls for navigation. On the right-hand edge of the viewer the sources list can be opened by clicking the blue arrow. Here, the contrast, grouping, LUT and visibility of the individual sources can be adjusted.