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Supporting Material

Dynamic super-resolution imaging of endogenous proteins on living cells at ultra-high density

Gregory Giannone, Eric Hosy, Florian Levet, Audrey Constals, Katrin Schulze, Alexander I. Sobolevsky, Michael P. Rosconi, Eric J Gouaux, Robert Tampé, Daniel Choquet, and Laurent Cognet

Supplementary information

Supplementary Figure 1

(A) Wide-field fluorescence image of a fibroblast portion expressing cytosolic GFP. (B) Super-resolved image of the trisNTA-AT647N non-specific binding obtained by uPAINT on the same cellular portion and (C) corresponding trajectories. Scale bars: 1µm. (D) Wide-field fluorescence image of a COS 7 cell portion expressing cytosolic GFP. (E) Super-resolved image of the anti-GFP-AT647Ns non-specific binding obtained by uPAINT on the same cellular portion and (F) corresponding trajectories. Scale bars: 1µm.

Supplementary Figure 1

The rate of trisNTA-AT647N detachment from fibroblasts expressing TM-6His and cytosolic GFP was measured using the fluorescence intensity. Fitting the curves with the function $y=\exp(-k_{off}t)+cte$ allowed us to extract the k_{off} of the trisNTA/6His interaction.

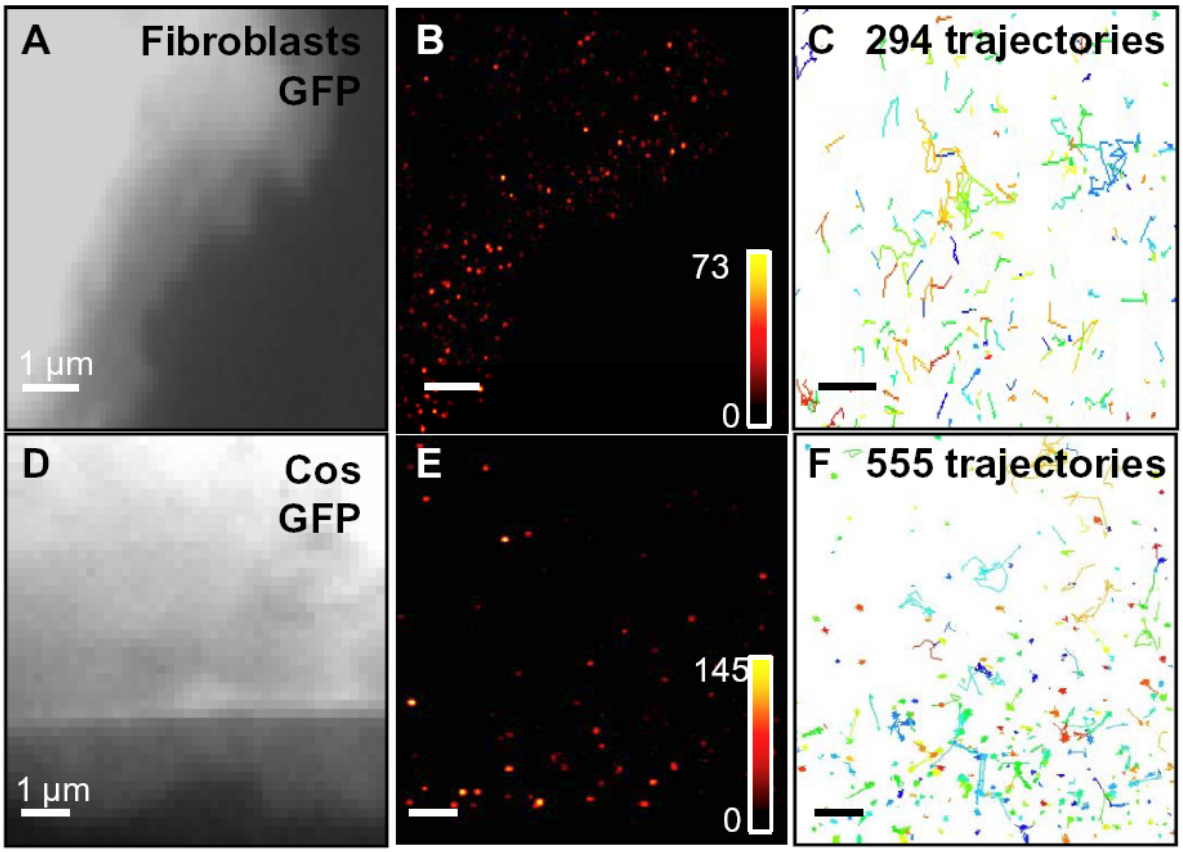
Supplementary Figure 3

(A) Super-resolved image of GPI-GFP labeled with anti-GFP-AT647Ns obtained by uPAINT. (B) Trajectories cumulated over 12 min on the inset depicted in (A). (C) Localization of trajectories over time for the same inset, showing that most high densities are the result of several trajectories at the same location. (D-F) Same as (A-C) but for TM-6His labeled with trisNTA-AT647N. Scale bars: 1µm. Insets are 1500×1500nm² in size.

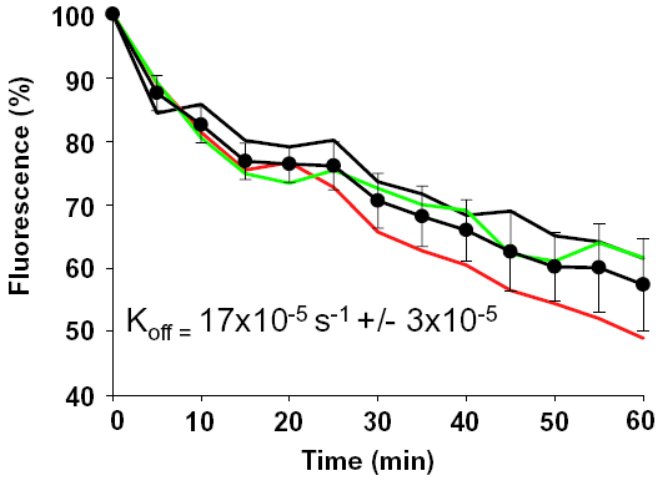
Movie 1:

Real-time unprocessed movie of trisNTA-AT647N (red) binding to TM-6His on a TM-6His/GFP expressing fibroblast surface (green).

Supplementary Figure 1



Supplementary Figure 2



Supplementary Figure 3