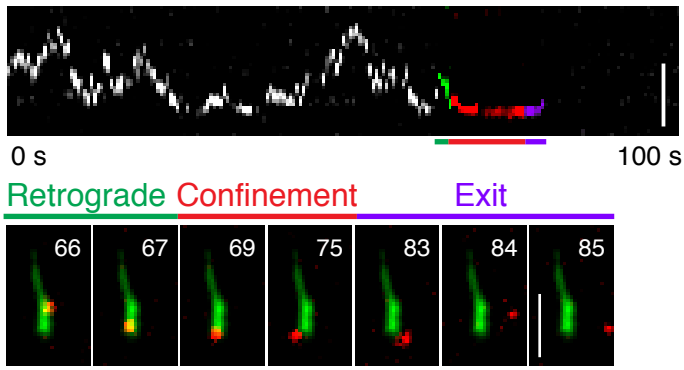
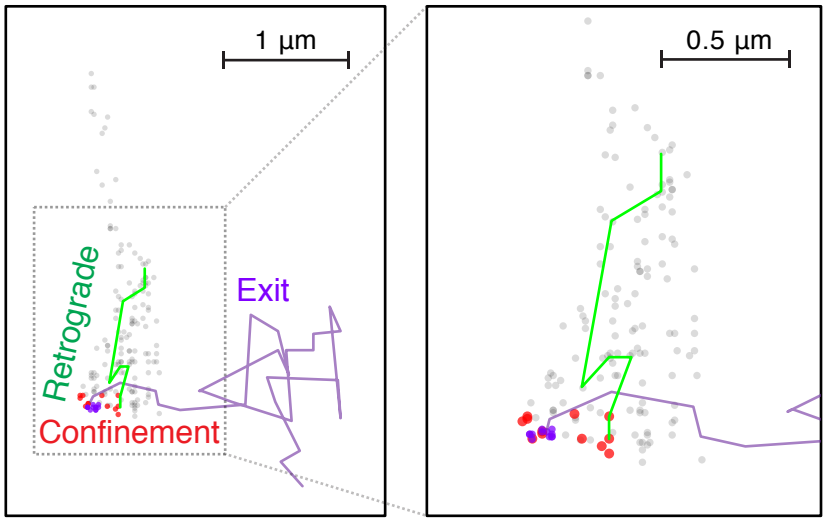
A



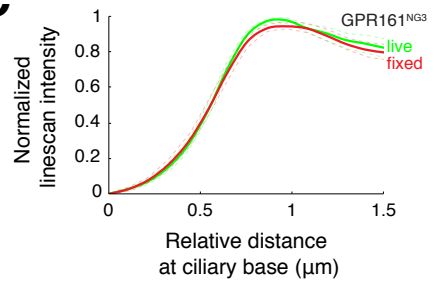


B

^{QD}GPR161 single molecule imaging data set	Theoritical probability of witnessing one or more exit event	Number of exit events imaged
#1: 26 movies x 20min = 520 min	90.3%	1
#2: 78 movies x 5min = 390 min	81.4%	1
#3: 17 movies x 20min = 340 min (NG channel captured at 1 min interval)	78.3%	1

The theoretical probability of witnessing one or more exit event is $P_{exit} = 1 - (1- (R_{exit} * N_{min}))^{N_{movie}}$
where R_{exit} is the exit rate of GPR161 (0.256/h = 0.0043/min, measured in Fig. 1G),
N_{min} is the length of each movie in minutes and N_{movie} is the number of movies captured.
Therefore, probability #1 = 1 - (1 - (0.0043 * 20))^26 = 0.90348

C



D