

## Raw Data explanations for S1 File.xlsx

- A Fig 1g - GCaMP3  
B Fig 1g - GCaMP6f  
D Text - GCaMP3, maximum rate of fluorescence increase  
E Text - GCaMP6f, maximum rate of fluorescence increase  
G Text - GCaMP3, maximum rate of fluorescence decay  
H Text - GCaMP6f, maximum rate of fluorescence decay  
J Fig 1h - GCaMP3  
K Fig 1h - GCaMP6f  
M Fig 1i - GCaMP3  
N Fig 1i - GCaMP6f
- P Fig 2b - GCaMP3, locomotion normalized to locomotion + visual stimulation  
Q Fig 2b - GCaMP3, normalized locomotion + visual stimulation  
S Fig 2c - GCaMP6f, locomotion normalized to locomotion + visual stimulation  
T Fig 2c - GCaMP6f, normalized locomotion + visual stimulation  
V Fig 2d - GCaMP3  
W Fig 2d - GCaMP6f
- Y Fig 3d - GCaMP3  
Z Fig 3d - GCaMP6f
- AB Fig 4c - GCaMP3  
AC Fig 4c - GCaMP6f
- AE S1 Fig - 1-(mean r) of GLAST-CreER(+-);R26-Isl-tdTomato(+-) mice; statistical comparison with Z, AA and AB  
AF S1 Fig - 1-(mean r) of GLAST-CreER(+-);R26-Isl-GCaMP3(+-);IP3R2(-/-) mice; statistical comparison with Y, AA and AB  
AG S1 Fig - 1-(mean r) of GLAST-CreER(+-);R26-Isl-GCaMP3(+-) mice; statistical comparison with Y, Z and AB  
AH S1 Fig - 1-(mean r) of GLAST-CreER(+-);R26-Isl-GCaMP6f(+-) mice; statistical comparison with Y, Z and AA

for all:

- row 15 mean  
row 16 SD  
row 17 SEM  
row 19 Lilliefors test for normal distribution (not normally distributed if <0.05)  
row 21/22 employed statistical test and p value, if applicable