

Figure 7-figure supplement 6. Dopamine axon signals and body movement when a mouse waits for water (A) GCaMP signals showed slight but significantly negative correlation with body speed, but tdTom did not (Pearson's correlation coefficient, t(21) = -2.6, p=0.015 for GCaMP; t(21) = 1.2, p=0.20 for tdTom, n = 22 animals, one sample t-test). tdTom signals in some animals show significant correlation, indicating motion artifacts in recording. (B) GCaMP, but not body speed or tdTom were modulated by correct choice versus error (t(21) = 3.3, p=0.0033 for GCaMP; t(21) = 0.43, p=0.66 for body speed; t(21) = -0.4, p=0.63 for tdTom, n=22 animals, paired t-test). (C) Linear regression of GCaMP signals with accuracy (correct or error) and body speed with elastic net regularization. GCaMP is modulated by accuracy (t(21) = 13.9, p= 4.2×10^{-12} , n = 22 animals, one sample t-test) even after normalizing with body speed. Body speed is slightly correlated (t(21) = -2.2, p=0.032, n = 22 animals, two-sided t-test). Red dots indicate significant (p<0.05) regression coefficient in each animal. 2 videos for 21 animals and 1 video for one animal were used.