

Calcium Signaling Throughout the *Toxoplasma gondii* Lytic Cycle. A Study Using Genetically Encoded Calcium Indicators.

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Supporting Videos :

Video S1 (Fig. 1A): Egress of GCaMP3-expressing tachyzoites from *R-GECO*-expressing HeLa cells after addition of 1 μM ionomycin. The buffer was Ringer buffer with 2 mM Ca^{2+} .

Video S2 (Fig. 2A): Lack of egress of *GCaMP3*-expressing tachyzoites from *R-GECO*-expressing HeLa cells upon addition of 1 μM thapsigargin in the presence of extracellular Ca^{2+} .

Video S3 (Fig. 3A): Egress of *GCaMP3*-expressing tachyzoites from *R-GECO*-expressing HeLa cells after addition of 5 mM DTT. The buffer used was Ringer buffer with 2 mM Ca^{2+} .

Video S4 (Fig. 4A): Egress of *GCaMP3*-expressing tachyzoites from *R-GECO*-expressing HeLa cells after addition of 0.01% saponin. The buffer was Ringer buffer with 2 mM Ca^{2+} .

Video S5A (Fig. 5C): Changes in fluorescence of *GCaMP6f*-expressing parasites within HeLa cells in Intracellular Buffer in the presence of 1 mM Ca^{2+} . Saponin at 0.01% was added at time 10 s.

Video S5B (Fig. 5D): Changes in fluorescence of *GCaMP6f*-expressing parasites within HeLa cells in Intracellular Buffer (no Ca^{2+} added, final free Ca^{2+} concentration is 90 nM). Saponin at 0.01% was added at time 10 s.

Video S6 (Fig. 7A-B): Changes in Ca^{2+} levels in *B-GECO*-expressing HeLa cells (*blue*), parasitophorous vacuole (*red*, as detected by *R-GECO* targeted to the PV), and *GCaMP3*-expressing tachyzoites (*green*) after addition of histamine.

Video S7 (Fig. 8): *GCaMP6*-expressing tachyzoites were allowed to invade in the presence of 2 mM Ca^{2+} . An increase in fluorescence indicates an increase in cytosolic Ca^{2+} followed by stimulation of motility and invasion.

Video S8a (Fig. 9A): *GCaMP6f*-expressing tachyzoites showing stimulation of gliding after adding Ca^{2+} . Notice that parasites drift and oscillate but after addition of Ca^{2+} to the buffer, fluorescence increases, parasites halt, attach and start gliding

Video S8b (Fig. 9B): *GCaMP6f*-expressing tachyzoites showing stimulation of motility after addition of thapsigargin and Ca^{2+} .