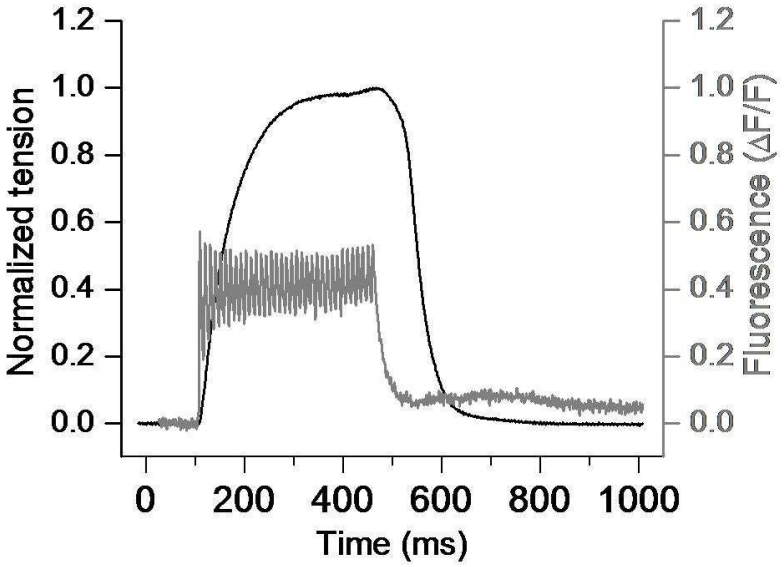
Supplemental Online Figure legends

Supplemental Online Figure 1. Simultaneous recording of tension (black) and Ca^{2+} (gray), reported with the dye Magfluo-4, obtained in a fibre of a manually dissected small bundle of FDB fibres. Note a movement artifact at the end of the Ca^{2+} transient.

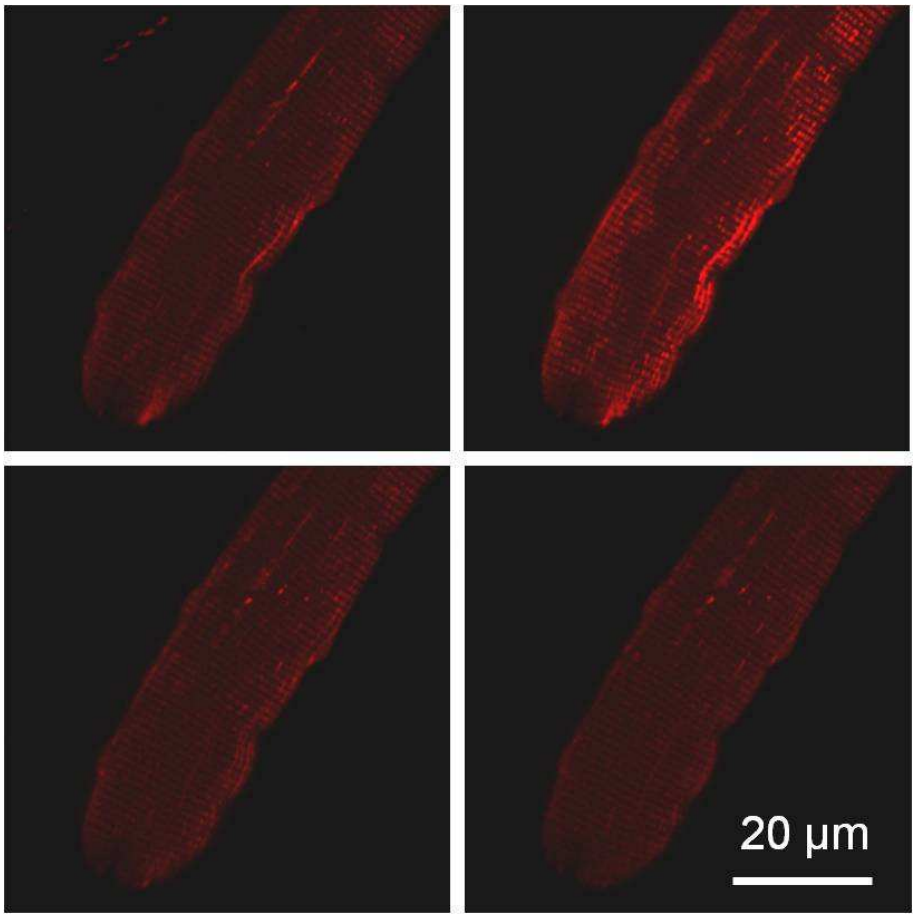
Supplemental Online Figure 2. Confocal images of a fibre labelled with Rhod-2 AM under repetitive stimulation. Control condition (upper left), after 75 tetani of 350 ms long, 100 Hz, every 4 s (upper right), and after 10 (lower left) and 20 (lower right) minutes of recovery. Note the transient increase in fluorescence coming from Rhod-2, which reflects the fatigue-induced increase in intramitocondrial Ca^{2+}. We can see that the fibre is very well adhered to the Laminin at the bottom of the chamber and did not appreciably displace during the fatiguing protocol.

Supplemental Online Figure 3. Correlation between the first time constant of decay and the number of tetani applied to MT-II fibres. The figure shows the separation between fMT-II (closed circles) and rMT-II (open circles).

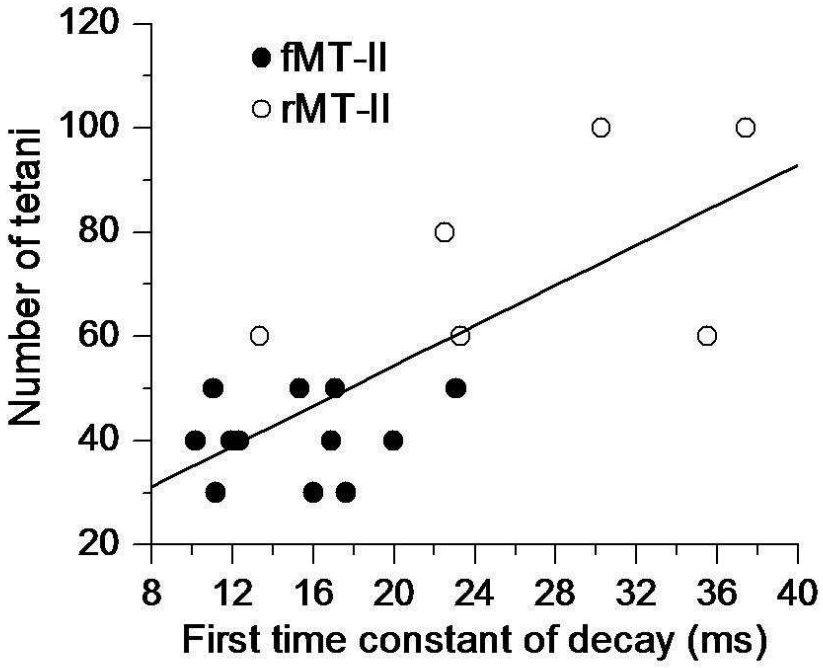
Supplemental Online Figure 4. Effect of repetitive tetanic stimulation on the basal fluorescence in MT-I (upper graph) and MT-II (lower graph) fibres loaded with Magfluo-4 AM. Each symbol represents the change in the level of basal fluorescence from the first to the last episode of stimulation in MT-I (upper part) and MT-II (lower part) fibres. To the right the change after recovery is shown. Although some fibres showed an increase at the end of the protocol, the mean change (from 26.4 to 30.2 AU for MT-I and from 22.1 to 23.4 AU for MT-II) was not statistically significant. The changes partially reversed giving a recovery value of 29.8 and 23.2 AU for MT-I and MT-II fibres, respectively. No statistical differences appeared between the last episode and the recovery. *$P<0.05$ compared to the first episode, paired t-test.



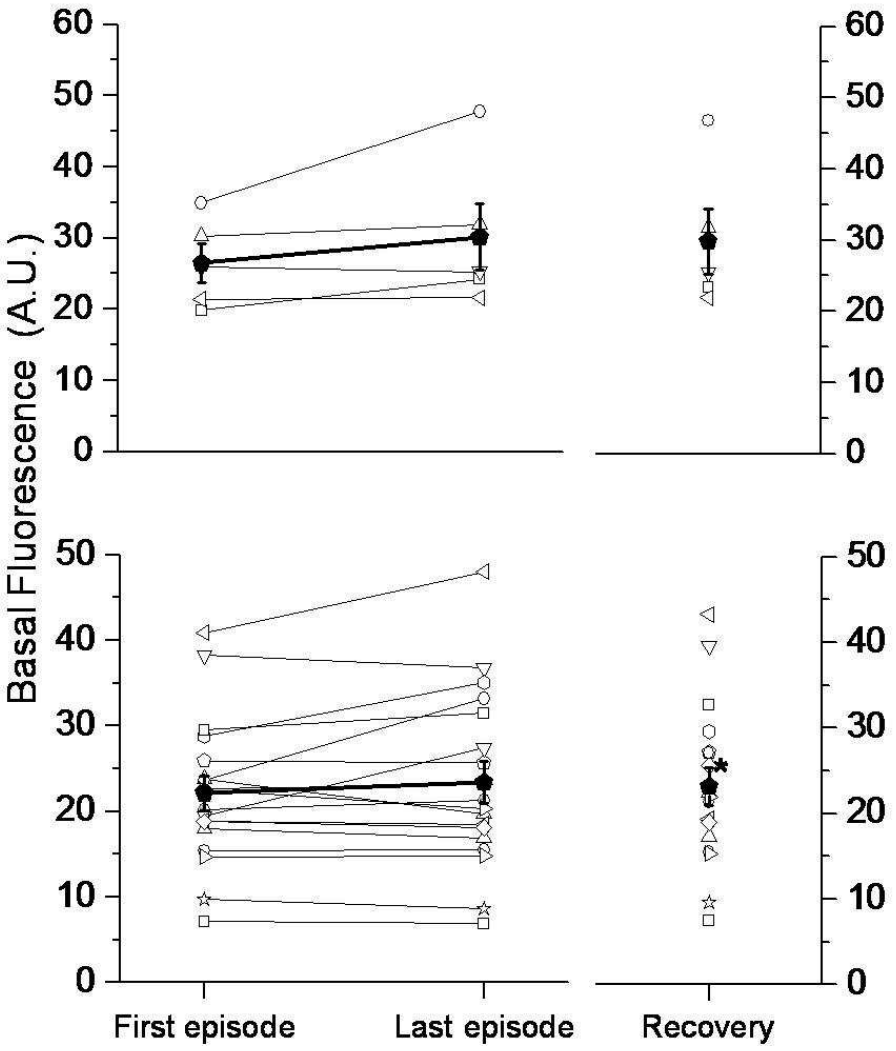
Supplemental Online Figure 1



Supplemental Online Figure 2



Supplemental Online Figure 3



Supplemental Online Figure 4