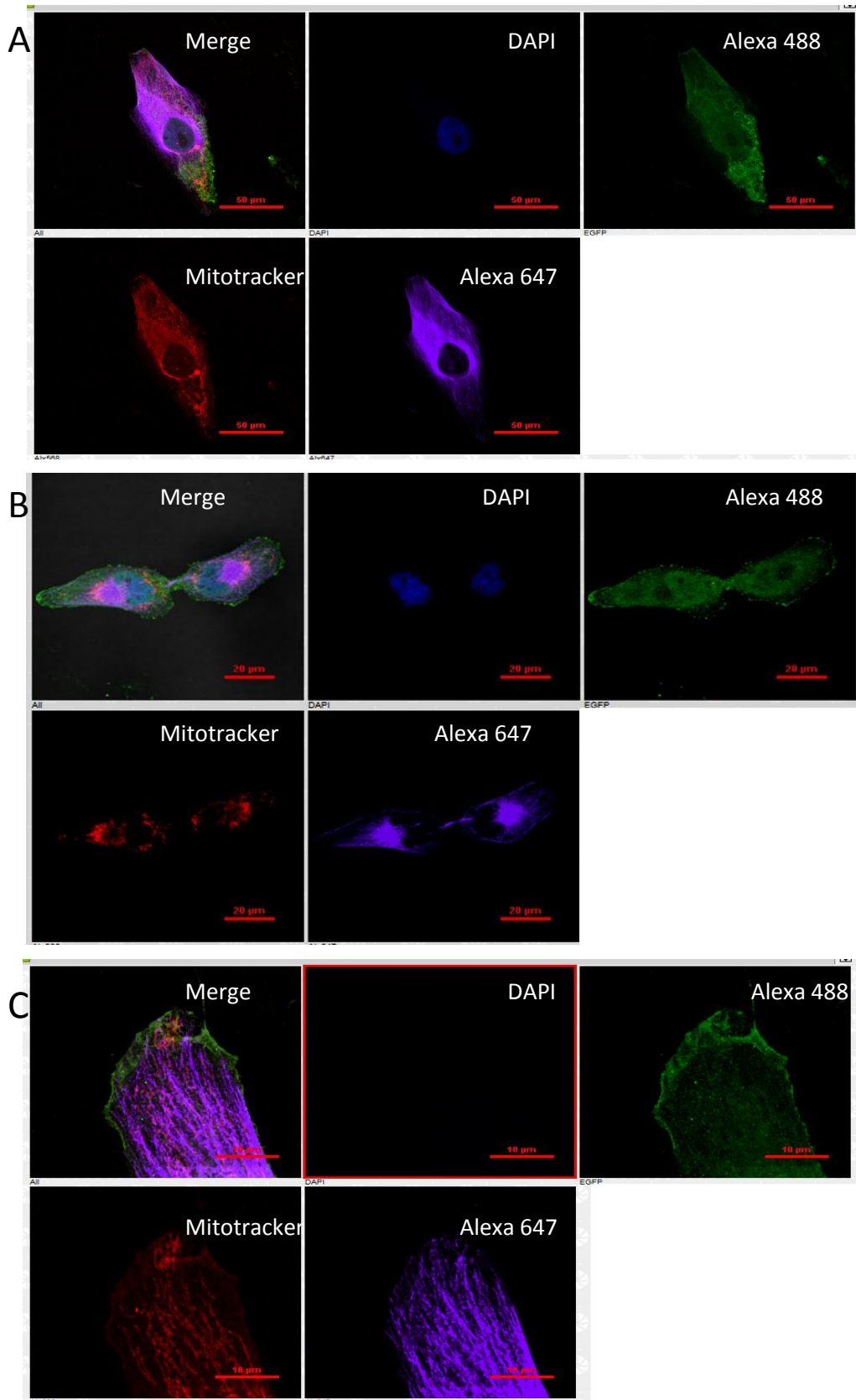


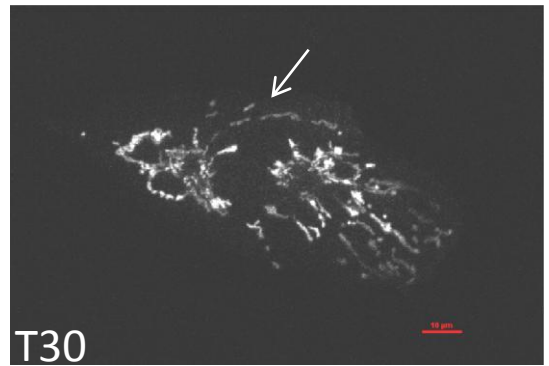
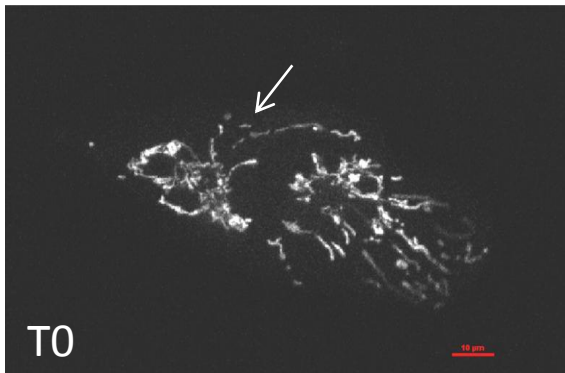
### Figure S1 : Unmerged images from Fig. 3

Microtubules were detected using an Alexa647-labeled, anti- $\alpha$ -tubulin antibody (purple); biotinylated NFL-TBS.40-63 peptide was labeled with streptavidin Alexa488 (green), the nuclei with diamidino phénylindole (DAPI; blue) and mitochondria with a mitotracker (RedCMX ROS). The *red bars* are the measuring scale.

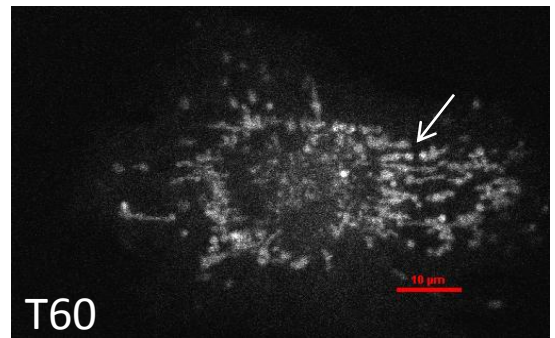
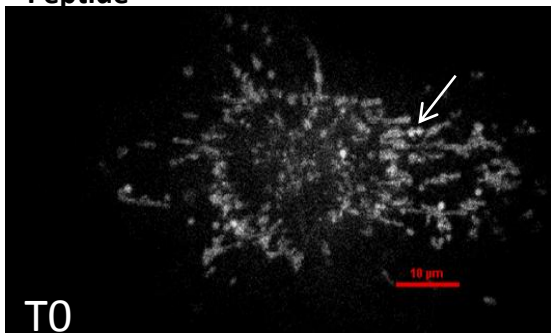


**Figure S2** : In vitro effect on mitochondrial motility of 15 hours exposure with 10  $\mu$ M NFL-TBS.40-63 peptide compared to scramble, using live confocal microscopy and Metamorph software ( $N=6$ ). Time duration 3 minutes, image every 5 seconds. T30 and T60 in seconds

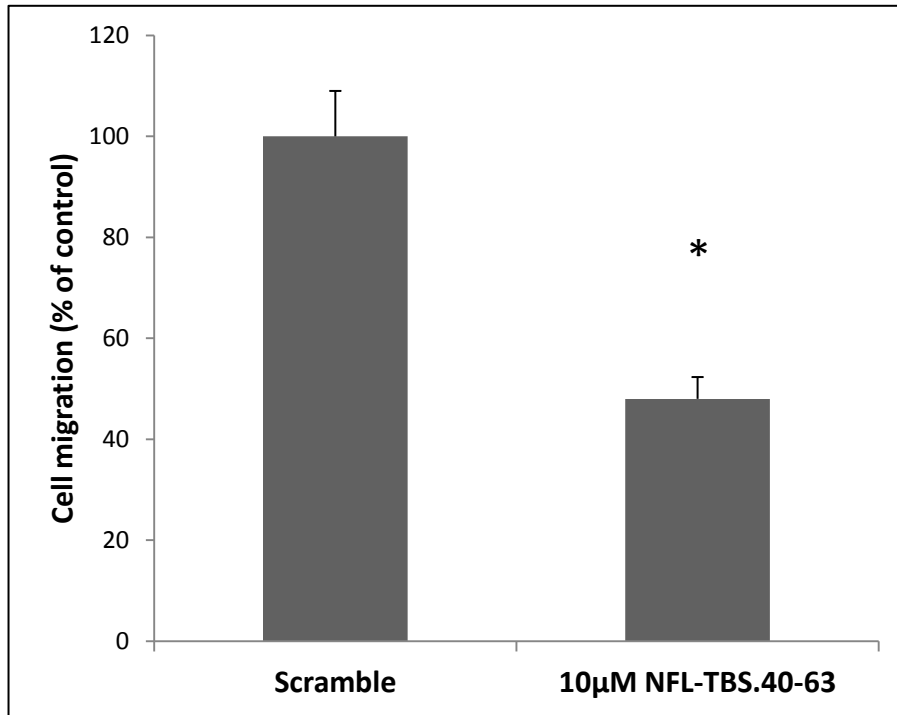
**Scramble**



**Peptide**



**Figure S3** : In vitro effect on T98G cell migration of 15 hours exposure with 10  $\mu$ M NFL-TBS.40-63 peptide, using Transwell migration assay . (\*  $P < 0.05$ )



### Figure S4: Confocal imaging of untreated T98G cells

Microtubules were detected using an Alexa647-labeled, anti- $\alpha$ -tubulin antibody (purple); biotinylated NFL-TBS.40-63 peptide was labeled with streptavidin Alexa488 (green), the nuclei with diamidino phénylindole (DAPI; blue) and mitochondria with a mitotracker (RedCMX ROS). The *red bars* are the measuring scale.

