

Roles of the KIF20A kinesin in the mechanics and migration of cancer cells

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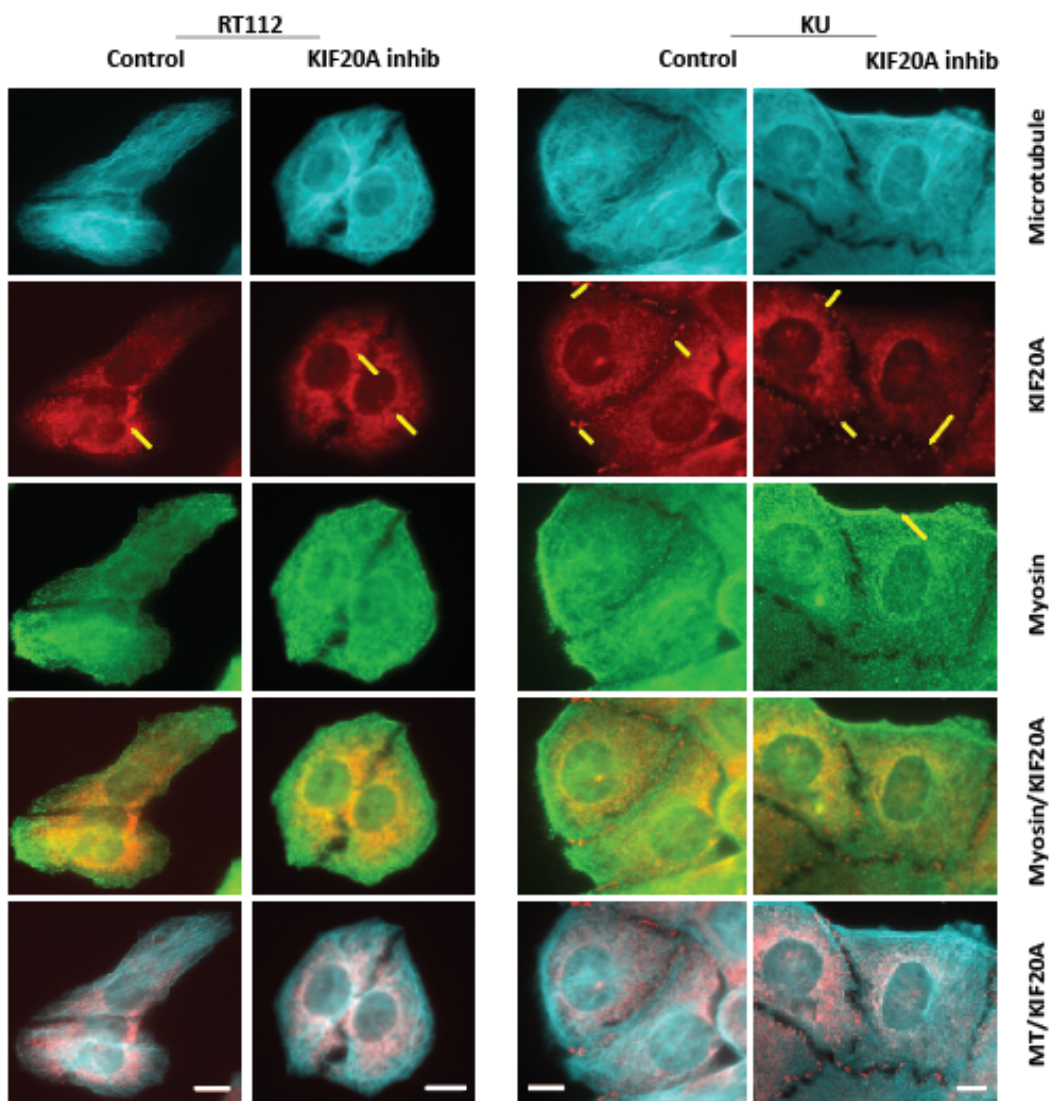
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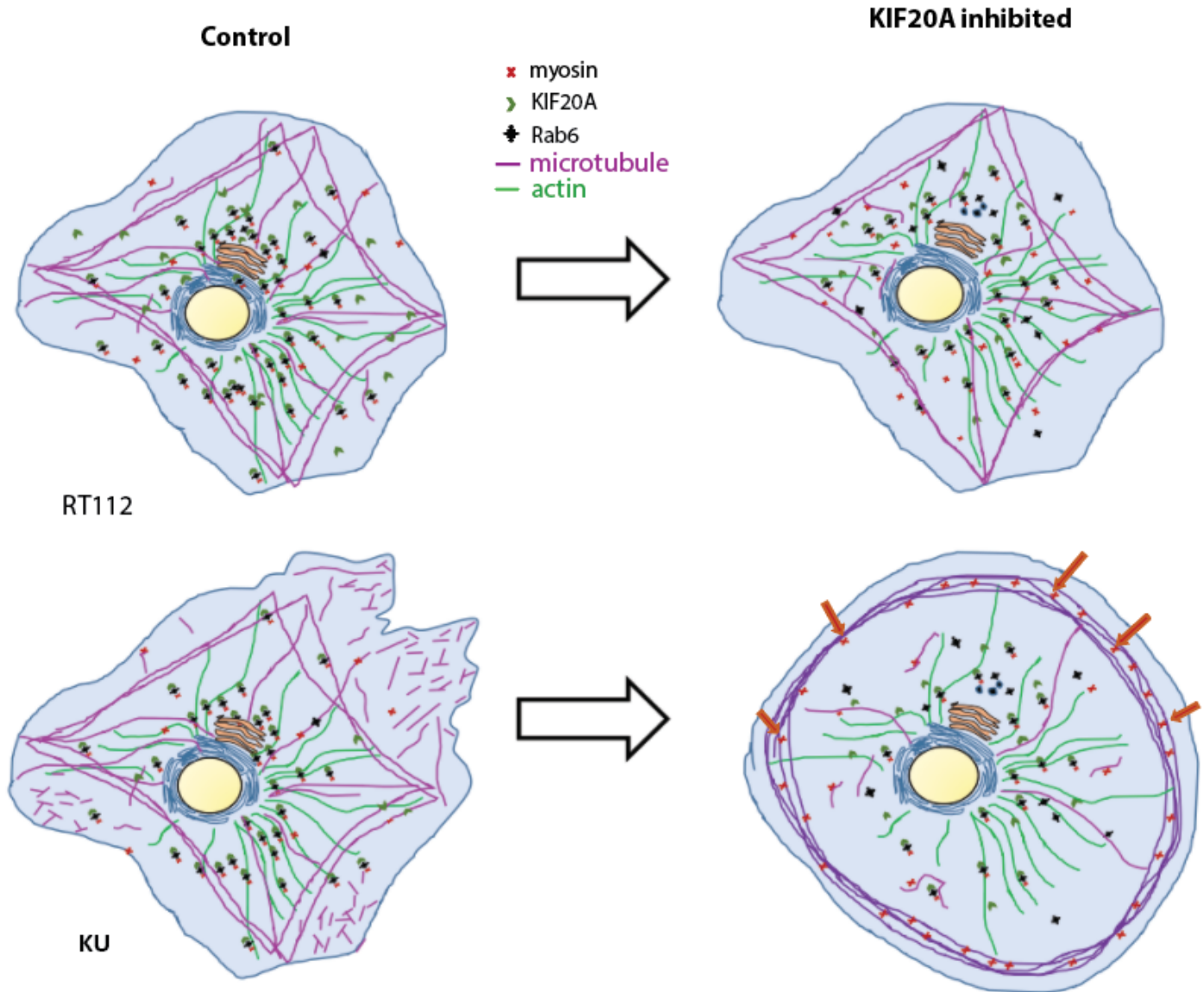
Supplementary information

Supplementary figure legends



Supplementary Figure S1:

(Top to bottom) Immunofluorescence images of microtubules (cyan), KIF20A (red), myosin II (green), microtubules/KIF20A merge, and myosin II/KIF20A merge for RT112 cells (left panel) and for KU cells (right panel) treated with the KIF20A inhibitor or with DMSO (control). Arrows point to changes in myosin localization in KU cells upon KIF20A inhibition. Scale bars, 10 μ m.



Supplementary Figure S2:

Scheme recapitulating the role of KIF20A and myosin II in the mechanics and motility of bladder cancer cells. The complex between Rab6, myosin II and KIF20A reported previously which mediates the KIF20A/myosin II interaction is perturbed upon KIF20A inhibition leading to a reorganization of the acto-myosin cortex specifically in KU cells.

Supplementary movies

Supplementary Movie 1: Migration of individual non-treated RT122 cells

RT112 cells were plated on 500Pa polyacrylamide gel for 24 hrs. DMSO was added to the cells at the same concentration as the drug before the movie started. The movie was taken at one frame per 5 minutes for 5 hrs or more.

Supplementary Movie 2: Migration of individual non-treated KU cells

KU cells were plated on 500Pa polyacrylamide gel for 24 hrs. DMSO was added to the cells at the same concentration as the drug before the movie started. The movie was taken at one frame per 5 minutes for 5 hrs or more.

Supplementary Movie 3: Migration of individual RT122 cells treated with 50 μ M paprotrain to inhibit KIF20A

RT112 cells were plated on 500Pa polyacrylamide gel for 24 hrs. 50 μ M paprotrain was added to the cells before starting the movie. The movie was taken at one frame per 5 minutes for 5 hrs or more.

Supplementary Movie 4: Migration of individual KU cells treated with 50 μ M paprotrain to inhibit KIF20A

KU cells cells were plated on 500Pa polyacrylamide gel for 24 hrs. 50 μ M paprotrain was added to the cells before starting the movie. The movie was taken at one frame per 5 minutes for 5 hrs or more.