

Supplementary Information

Movies S1-S4

Movie S1. Live cell imaging of WM239A cells expressing palmitoylation resistant mutant C⁵⁹⁰G MCAM-GFP. 57% (n=33) of recorded cells redistributed MCAM-GFP asymmetrically after addition of 1% FBS (1 frame/minute).

Movie S2. Live cell imaging of WM239A cells expressing palmitoylation resistant mutant MCAM-GFP. 4% (n=22) of recorded cells redistributed MCAM-GFP asymmetrically after addition of 1% FBS (1 frame/minute).

Movie S3. Live cell imaging WT MCAM-YFP (red) localizes distinctly from palmitoylation resistant C⁵⁹⁰G MCAM-CFP (green) in Wnt5a treated melanoma cells.

Movie S4. Live cell imaging of WT MCAM-YFP (red) and WT MCAM-CFP (green) colocalize asymmetrically in Wnt5a treated melanoma cells.