SUPPLEMENTAL INFORMATION

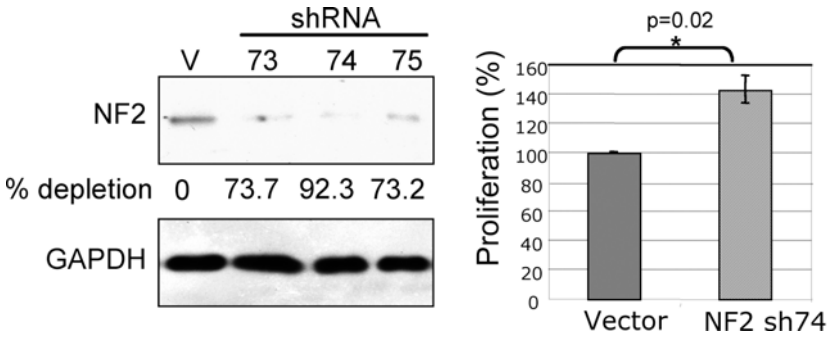


Fig. S1. NF2 silencing by several shRNAs induces increased cell proliferation. Left panel shows depletion of NF2 in LN229 cells by several shRNAs. Right graph shows increased proliferation in LN229 cells by NF2 silencing with shRNA74. Means±STDs from at least two independent experiments are shown.

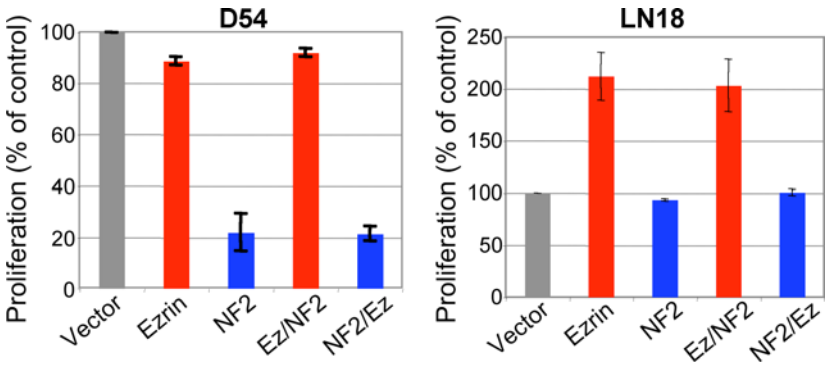
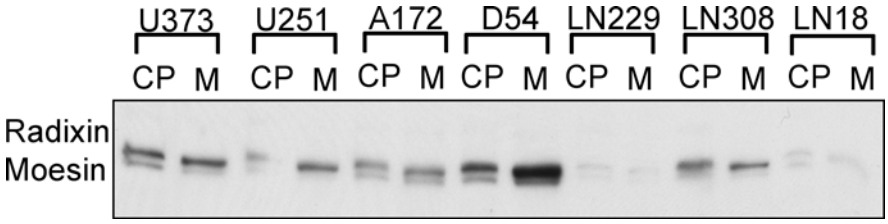


Fig. S2. The FERM domain controls the opposite phenotype of ezrin and NF2 in GBM cells. Proliferation studies in NF2-negative D54 and NF2-positive LN18 GBM cells stably expressing ezrin, NF2 and chimeric proteins. Means±STDs from at least two independent experiments for each cell line are shown.



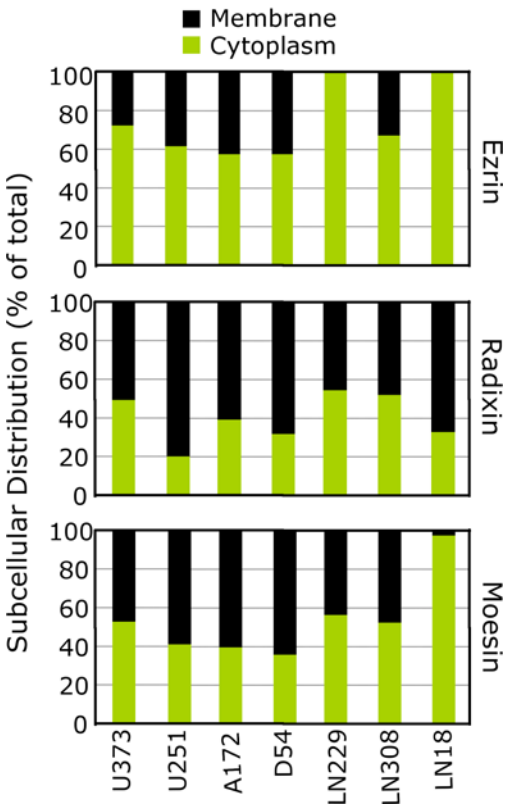


Fig. S3. Radixin and moesin intracellular distribution in GBM cells. Radixin and moesin distribution in cytoplasmic (CP) and membrane (M) fractions was also analyzed in the GBM cell fractions presented in Fig. 4A. An antibody for radixin cross-reacting with both proteins was used (C-15, sc.6408, Santa Cruz Biotechnology) and identifies radixin as the upper band and moesin as the lower band. The densitometric intensities in the two compartments were measured by Image J program and are represented graphically as percentage of the summed cytoplasmic and membrane intensities. Ezrin distribution is also shown for comparison.

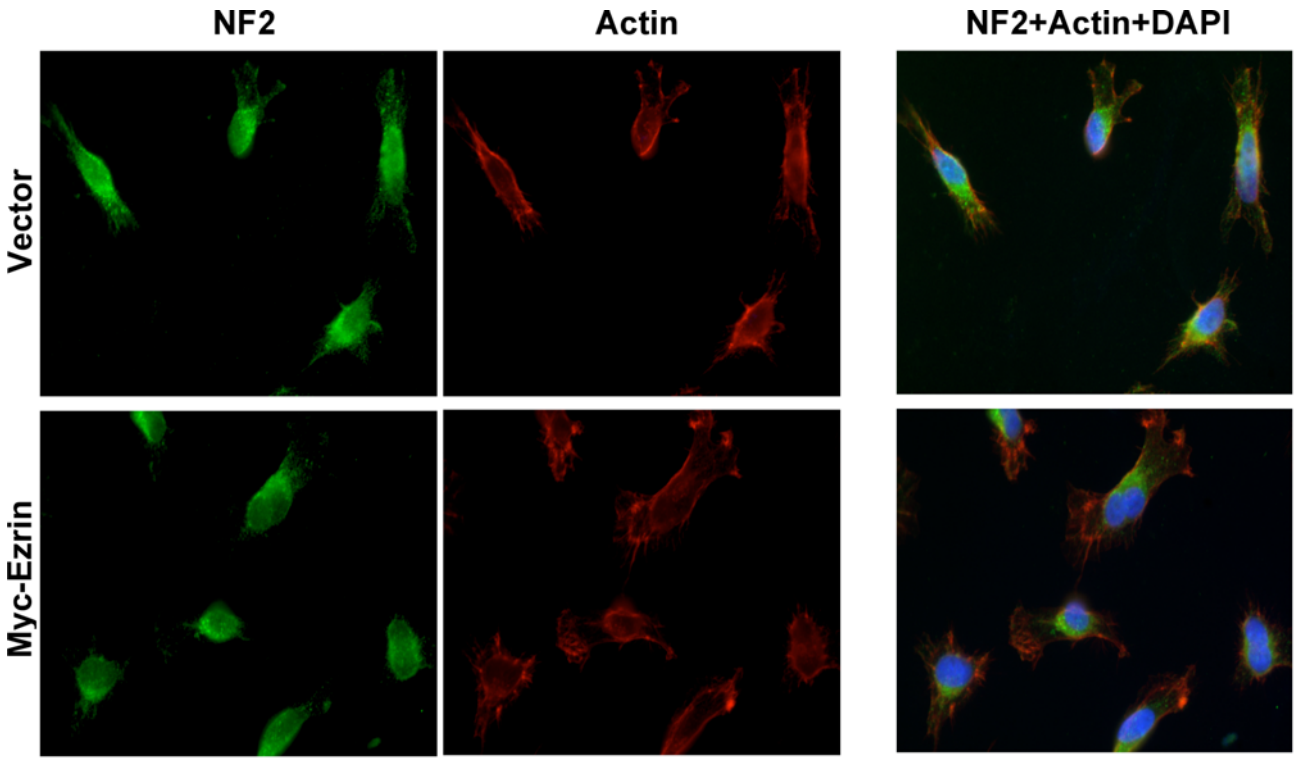


Fig. S4. Overexpressed ezrin alters endogenous NF2 cellular distribution in LN18 cells. Immunofluorescence analysis (40X) of LN18 vector control cells (upper panels) showing extended cytoplasmic staining of endogenous NF2 (green) reaching the cell membrane and extensions. Note co-localization of NF2 with cortical actin in the merged image. In contrast, NF2 displayed only perinuclear localization in cells overexpressing Myc-tagged ezrin (Myc-ezrin) (lower panels). Images were acquired as in Fig. 4.

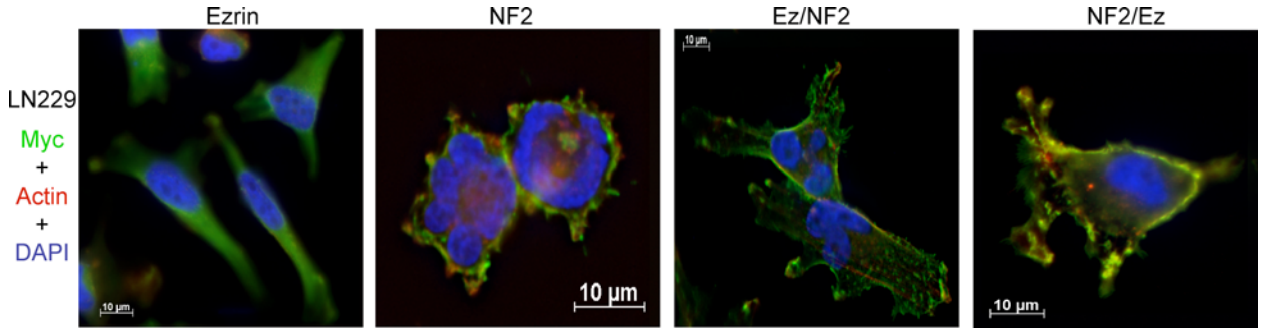


Fig. S5. Subcellular distribution of ezrin, NF2 and ezrin-NF2 chimera. Immunofluorescence analysis (63x) of LN229 cells expressing the molecules indicated on top. Images were acquired as in Fig. 5D.

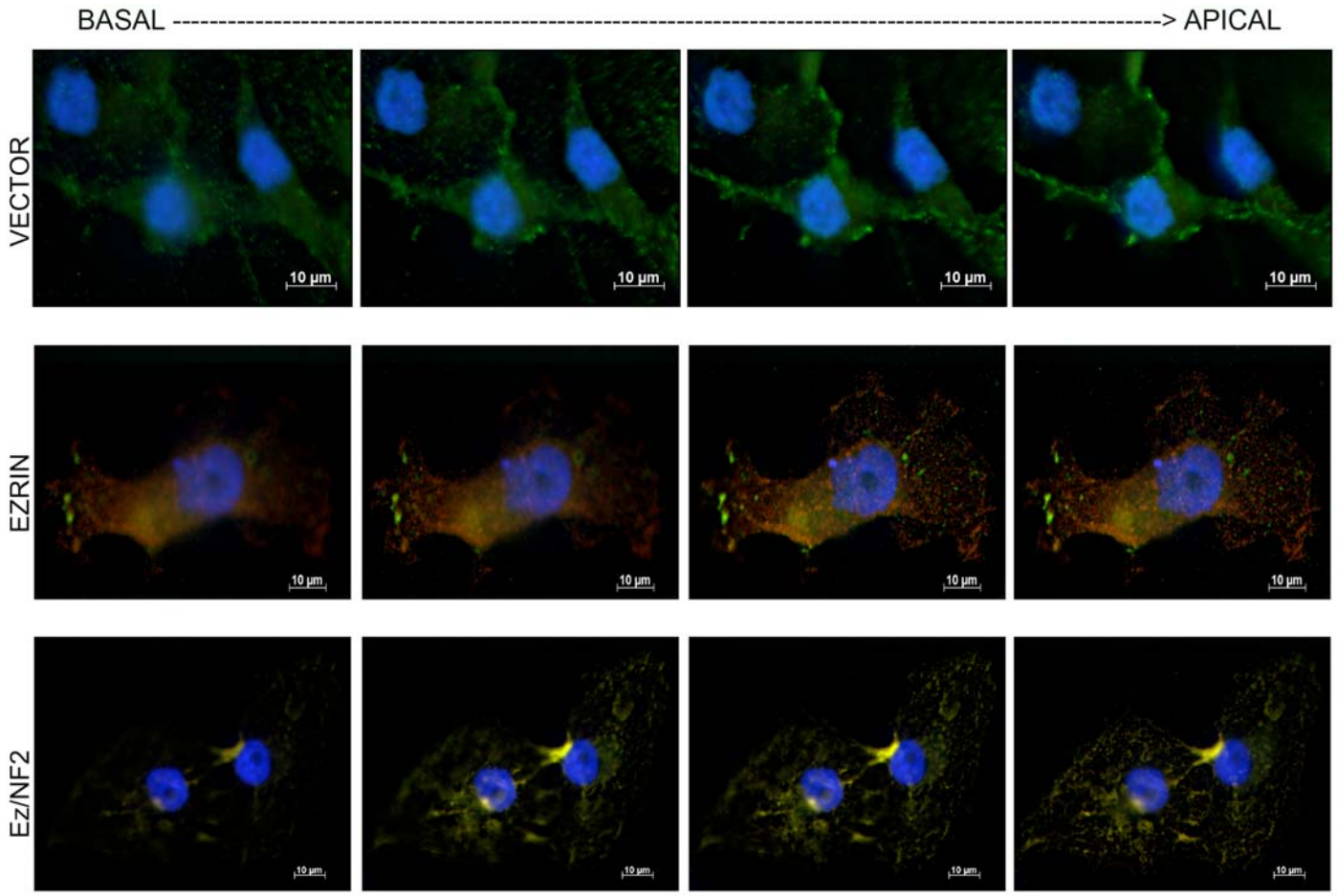


Fig. S6. Distribution of Ez/NF2 chimera in apical microspikes. Deconvolution series from basal (left) to apical (right) of the immunofluorescence images (63x) presented in Fig. 5D. LN229 cells expressing the Myc-tagged molecules indicated on the left were labeled for P-ERM (green), Myc (red) and DAPI (blue). Note distinct distribution profiles of ezrin and P-ERM (middle row) and co-localization (yellow) of Ez/NF2 with P-ERM in apical microspike-like structures (bottom row).