Supplementary Figures:

Supplementary Figure S1. The polyclonal fibrillin-1 and polyclonal fibrillin-2 antibodies are monospecific. Five day-old wild type, Fbn1\textsuperscript{MgN/MgN} and Fbn2\textsuperscript{−/−} mouse embryonic fibroblast (MEF) cultures or mouse skin fibroblast (MSF) were immunostained with the indicated antibodies (green signal). Fibrillin-1 antibody stained microfibrils formed by the wild type MSFs and Fbn2\textsuperscript{−/−} MEFs, but not Fbn1\textsuperscript{MgN/MgN} MSFs; Fibrillin-2 antibody stained microfibrils formed by the wild type MEFs and Fbn1\textsuperscript{MgN/MgN} MEFs, but not the Fbn2\textsuperscript{−/−} MSFs. Nuclei were stained with DAPI (blue); scale bars = 100\textmu m.
Supplementary Figure S2. Fibrillin-1 and fibrillin-2 colocalize in microfibrils produced by HNPCECs and MG63 cells. Human non-pigmented ciliary epithelial cells (HNPCECs) and human osteosarcoma cells (MG63) were stained with fibrillin-1 antibody (red signal) and fibrillin-2 antibody (green signal). In both cell types, fibrillin-1 and fibrillin-2 immunofluorescence colocalized (merged image, yellow signal). Nuclei were stained with DAPI (blue); scale bars = 25 µm.
Supplementary Figure S3. Dose-dependent suppression of fibrillin-2 assembly in fibroblasts upon inhibition of fibronectin assembly by FUD. 

*Fbn1*MgrN/+ mouse embryonic fibroblasts (MEF) were cultured without, or in the presence of indicated levels of FUD. Fibronectin and fibrillin-2 microfibrils were observed via immunofluorescence microscopy using monoclonal fibronectin antibody (red signal) and polyclonal fibrillin-2 antibody (green signal). Yellow
signal shows areas of signal overlap, indicating colocalization. When fibronectin assembly was inhibited by FUD in \( Fbn1^{MgN/+} \) MEFs, fibrillin-2 assembly diminished. Nuclei were stained with DAPI (blue); scale bars = 50µm.