Title	Noncontact three-dimensional mapping of intracellular hydromechanical properties by Brillouin microscopy
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Abstract	Current measurements of the biomechanical properties of cells require physical contact with cells or lack subcellular resolution. Here we developed a label-free microscopy technique based on Brillouin light scattering that is capable of measuring an intracellular longitudinal modulus with optical resolution. The 3D Brillouin maps we obtained of cells in 2D and 3D microenvironments revealed mechanical changes due to cytoskeletal modulation and cell-volume regulation.
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