Three-dimensional solution structure of the calcium-signaling protein apo-S100A1 as determined by NMR.

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Abstract: S100A1, a member of the S100 protein family, is an EF-hand containing Ca(2+)-binding protein of 93 residues. In the apo-form, S100A1 exists as a homodimer and adopts the expected EF-hand conformation. However, in the presence of Ca(2+), its dimerization state changes, and an additional Ca(2+) binding site appears in its structure. This may explain the Ca(2+) dependence that S100A1 has for binding several of its biological targets.

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