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Title:	Biophysical characterization of extracellular domains E3-E4-E5 and E4-E5 of E-cadherins
Authors:	Kaur, Harpreet (/jspui/browse?type=author&value=Kaur%2C+Harpreet)
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Abstract:	The E (Epithelial) -cadherins belong to the classical subgroup of the cadherin superfamily. These are cell surface glycoproteins that exhibit differential binding essential for tissue morphogenesis and development. The classical cadherins are characterized by the presence of a five-domain extracellular region, a single-pass transmembrane region, and a cytoplasmic region. We describe the expression and partial characterization of domains E3-E4-E5 and E4-E5 of E-cadherin. Both the protein constructs are aggregation prone with the majority of the expressed population found in the inclusion bodies. Different native and partial denaturing purification strategies were employed to solubilize the protein. Here we describe the structural characterization of these constructs using fluorescence spectroscopy and circular dichroism. Changes in the conformation of E3-E4-E5 were observed upon Ca ²⁺ addition whereas these changes were not so significant in case of E4-E5. Also the thermostability of the protein was examined through differential scanning calorimetry.
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