

Conformational Switch of hRAGE upon Self-Association

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Abstract : The human receptor for advanced glycation end product is a plasma membrane receptor with an intrinsically disordered region. The protein consists of three extracellular domains, a single membrane spanning transmembrane domain, and a cytosolic domain which is intrinsically disordered and responsible for signaling. The disordered nature of the cytosolic domain allows it to be dynamic in solution. This receptor self-associates to higher forms. The association is triggered by ligand, metal or by the extracellular domain. Fluorescence spectroscopy technique is used to test the self-association of the different concentrations of the cytosolic domain. This work has concluded that the cytosolic domain of this receptor also self-associates. Moreover, the self-association does not require ligand or metal.

Keywords : fluorescence spectroscopy, hRAGE, IDP, Self-association

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