

Poster Presentation

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Studies of Heat shock protein 27 Interactions

A. Aguda¹, N. Nguyen¹, S. Caner¹, S. Moore^{2,3}, B. Lelj-Garolla^{2,3}, A. Zoubeidi^{2,3}, M. Gleave^{2,3}, G. Brayer¹

¹University of British Columbia, Department of Biochemistry and Molecular Biology, Vancouver, Canada, ²University of British Columbia, The Vancouver Prostate Centre; Department of Urologic Sciences, Vancouver Canada, ³Vancouver Cancer Centre, BC Cancer Agency, Vancouver, British Columbia, Canada

Human heat shock protein 27 (Hsp27) is an oligomeric and cell survival protein that has been associated with several cancers including prostate and breast cancer. It's a known anti-apoptotic protein that functions as a molecular chaperone for several proteins. Hsp27 characteristically binds and stabilizes numerous partially unfolded proteins preventing their degradation, and has been shown to prevent actin polymerization in vitro. Several actin-binding residues involved in this interaction have been identified at the N-terminal loop and highly conserved alpha crystallin domains of Hsp27. Multiple assays have demonstrated that this hydrophobic actin-binding site is also involved in other protein binding. We therefore propose a common substrate-binding region on Hsp27 and present a model of Hsp27 binding to actin.

Keywords: Hsp27, Actin, crystallin