
# Activation of natural killer cells by heat shock protein 70.

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Intracellular heat shock proteins (HSP) function as molecular chaperones, they support folding and transport mechanisms of other proteins under physiological conditions and following physical or chemical stress. More recently, extracellular localized HSP have been found to play key roles in the induction of a cellular immune response. Either they act as carrier molecules for immunogenic peptides that are presented on Antigen Presenting Cells (APC) to cytotoxic T-cells or they themselves act as activatory molecules for the innate immune system. Binding of uncomplexed HSP to HSP-receptors on APC has been found to induce the secretion of inflammatory cytokines. Furthermore, an unusual tumor-selective membrane-localization of non-conserved regions of the 72 000 Da HSP (Hsp70) has been found to act as a recognition structure for natural killer (NK) cells. In this review the interaction of NK cells with Hsp70 or peptides derived thereof will be eluciated in more detail.

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