G101 Signal Transduction of AMPs on Cold Adapted Mouse Peritoneal Macrophage

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To elucidate the effects of cold on the signal transduction of mouse macrophages, AMP was applied to the membrane fraction system supplemented with azid-GTP labeled with ^{32}P, which translocates to GTP-binding proteins with ligand activation. From the results obtained by ECL and autoradiography, the data showed that there is no $G\alpha s$ in mouse macrophage membranes. The identified Gq_{11} is not involved in signal transduction stimulated with AMPs. Identified GTP binding proteins activated by AMP is below 30kDa, belonging to low molecular weight GTP bindign proteins(LMWG). Further more GTPase from cold acclimated mouse macriphages showed enhanced susceptiblities to AMP stimulation. The cold adaptation enhances susceptiblity to AMP in macrophages. This result the mouse immune system can be affected by cold, because AMPs concentrations are changing in relation to the seasonal fluctuations of temperature.

G102 A Polypeptide Encoded within the Murine AIDS Defective Virus Stimulates Primary Proliferation of $CD8^+$ T Cell

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The murine AIDS(MAIDS) is a retrovirus-induced disease that shows severe immunodeficiency with abnomal lymphoproliferation in susceptible strains of mice. To clarify the antigenicity of gag gene products of the LP-BM5 defective virus, which is known as the causative virus of MAIDS, we expressed and purified the gag p12 gene product (p12) by using a baculovirus expression vector system. The p12 protein strongly stimulated the proliferation of normal C57BL/6 (B6) lymph node T-cell in vitro. Furthermore, a 25-mer synthetic polypeptide within the p12 sequence gave rise to the similar or even higher activation of T-cells. The phenotype of responding T-cells was found to be $CD8^+$ $CD44^{low}$, indicating that naive $CD8^+$ T-cells respond against a peptide encoded within a MAIDS defective virus gag p12 gene. Finally, the expression of T-cell receptor (TcR) V_β on the responding $CD8^+$ T-cells was analyzed. Although $CD8^+$ T-cells with the particular V_β chains were expanded in response to the 25-mer peptide, this polypeptide does not seem to be a superantigen, since this response is MHC class I-restricted and the V_β preference is not striking. The presentation pathway of this highly antigenic polypeptide will be discussed.