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Title:	Galectin-3 Regulates γ -Herpesvirus Specific CD8 T Cell Immunity
Authors:	Kaur, M. (/jspui/browse?type=author&value=Kaur%2C+M.) Kumar, Dhaneshwar (/jspui/browse?type=author&value=Kumar%2C+Dhaneshwar) Singh, Sudhakar (/jspui/browse?type=author&value=Singh%2C+Sudhakar) Sehrawat, S. (/jspui/browse?type=author&value=Sehrawat%2C+S.)
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Abstract:	To gain insights into the molecular mechanisms and pathways involved in the activation of γ -herpesvirus (MHV68)-specific T cell receptor transnuclear (TN) CD8+ T cells, we performed a comprehensive transcriptomic analysis. Upon viral infection, we observed differential expression of several thousand transcripts encompassing various networks and pathways in activated TN cells compared with their naive counterparts. Activated cells highly upregulated galectin-3. We therefore explored the role of galectin-3 in influencing anti-MHV68 immunity. Galectin-3 was recruited at the immunological synapse during activation of CD8+ T cells and helped constrain their activation. The localization of galectin-3 to immune synapse was evident during the activation of both naive and memory CD8+ T cells. Galectin-3 knockout mice mounted a stronger MHV68-specific CD8+ T cell response to the majority of viral epitopes and led to better viral control. Targeting intracellular galectin-3 in CD8+ T cells may therefore serve to enhance response to efficiently control infections.
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