Title: Staphylococcal enterotoxins modulate the effector CD4⁺ T cell response by reshaping the gene expression profile in adults with atopic dermatitis

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Supplementary figures



Supplementary Figure S1. Anergy-associated differentially expressed genes (DEGs) in atopic dermatitis. Volcano plots show DEGs between atopic dermatitis, *AD*, and health controls, *HC*, in basal condition (A) and after SEA stimulation (B). Positive values in *x*-axis indicate genes up-regulated in AD group whereas negative values point to genes up-regulated in HC group. Genes whose absolute fold change values (log2) were \geq 1 were highlighted in red and labeled.



Supplementary Figure S2: Altered cytokine polyfunctional response in CD4⁺ T cells after SEA stimulation in AD. Functional analysis of the frequency of the CD4⁺ T cells from atopic dermatitis patients (AD, n = 15) and healthy controls (HC, n = 10) that were positive for IL-17A, IL-22, IFN- γ , MIP-1 β or TNF without (Basal) and after SEA stimulation was performed by multiparametric flow cytometry. Lines represent the median percentage of population positivity for each cytokine combination. *p<0.05, **p<0.01, ****p<0.0001.



Supplementary Figure S3: Cytokine polyfunctional response in CD4⁺CD38⁻ T cells after SEA stimulation in AD. Frequencies of polyfunctional T cells at baseline and after SEA stimulation from HC (n = 10) compared to AD patients (n = 15) were performed by multiparametric flow cytometry. Lines represent the median secretion of each cytokine combination. *p<0.05, **p<0.01, ***p<0.001, ****p<0.0001.



Supplementary Figure S4: Altered cytokine polyfunctional response in CD4⁺CD38⁺ T cells is associated with a dysfunctional response to SEA in AD patients. Frequencies of polyfunctional T cells at baseline and after SEA stimulation from HC (n = 10) compared to AD patients (n = 15) were performed by multiparametric flow cytometry. Lines represent the median secretion of each cytokine combination. *p<0.05, **p<0.01, ***p<0.001, ****p<0.0001.