

**Table S1.** Sequence of Primers and Probes.

Item	Name	Sequence (5' →3' )
<i>IL2RG</i>	For primer	AGGCCACACAGATGCTAAAACT
	Rev primer	TGCTACATTCACGTCCCTAGT
<i>TREC</i>	For primer	CACATCCCTTTCAACCATGCT
	Rev primer	GCCAGCTGCAGGGTTTAGG
	Probe	/6-FAM/ ACACCTCTG/ZEN/GTTTTTGTAAGGTGCCCACT/IABkFQ/
<i>KREC</i>	For primer	TCCCTTAGTGGCATTATTTGATCACT
	Rev primer	AGGAGCCAGCTCTTACCCTAGAGT
	Probe	/6-FAM/TCTGCACGG/ZEN/GCAGCAGGTTGG/IABkFQ/
<i>RPP30</i>	For primer	AGATTTGGACCTGCGAGCG
	Rev primer	GAGCGGCTGTCTCCACAAGT
	Probe	/HEX TTCTGACCT/ZEN/GAAGGCTCTGCGCG /IABkFQ/
<i>STR</i> analysis	For primer	CAGGATATTATGTGATGGAATCC-6FAM
	Rev primer	GATCTCTTCTCTCTCTCTCTTTCTCCC

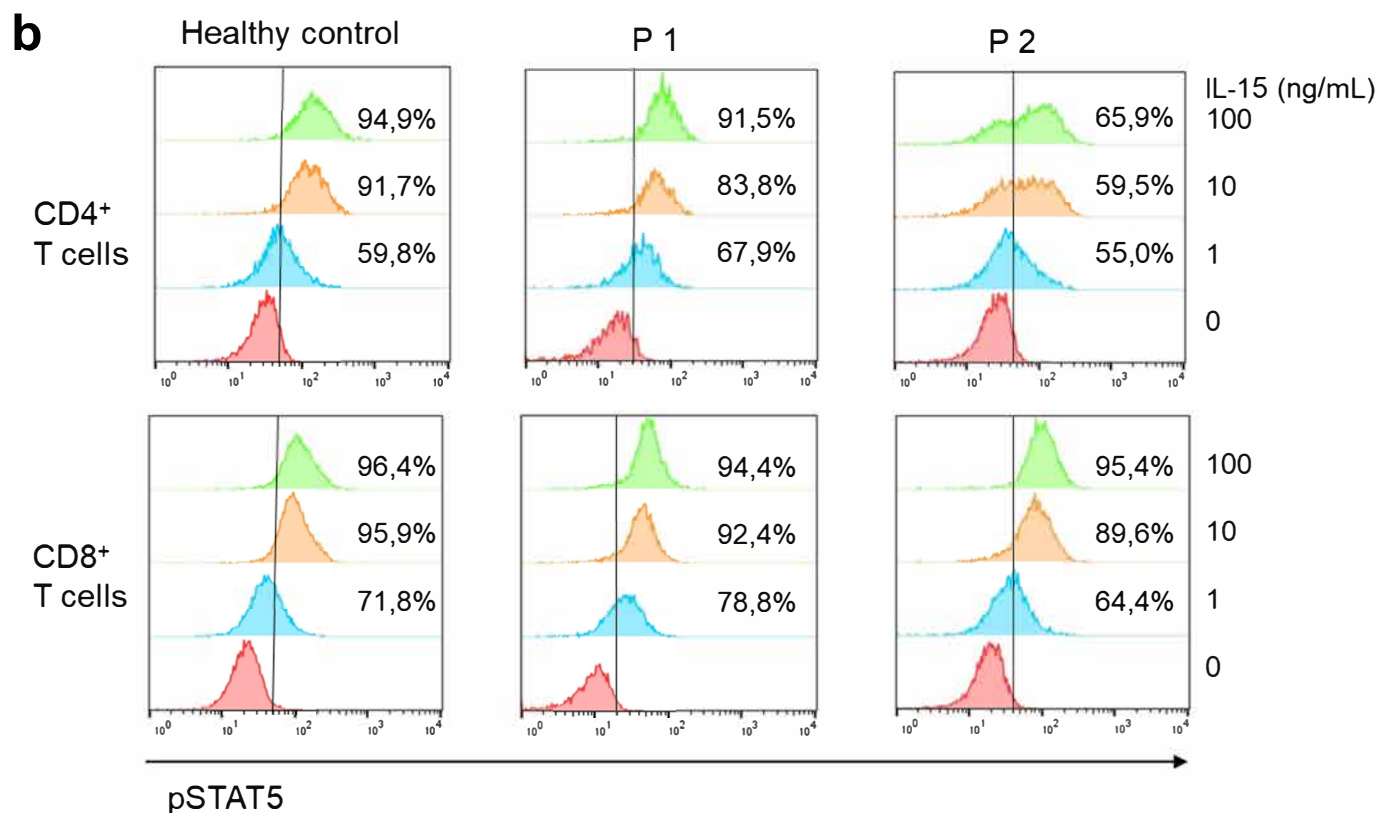
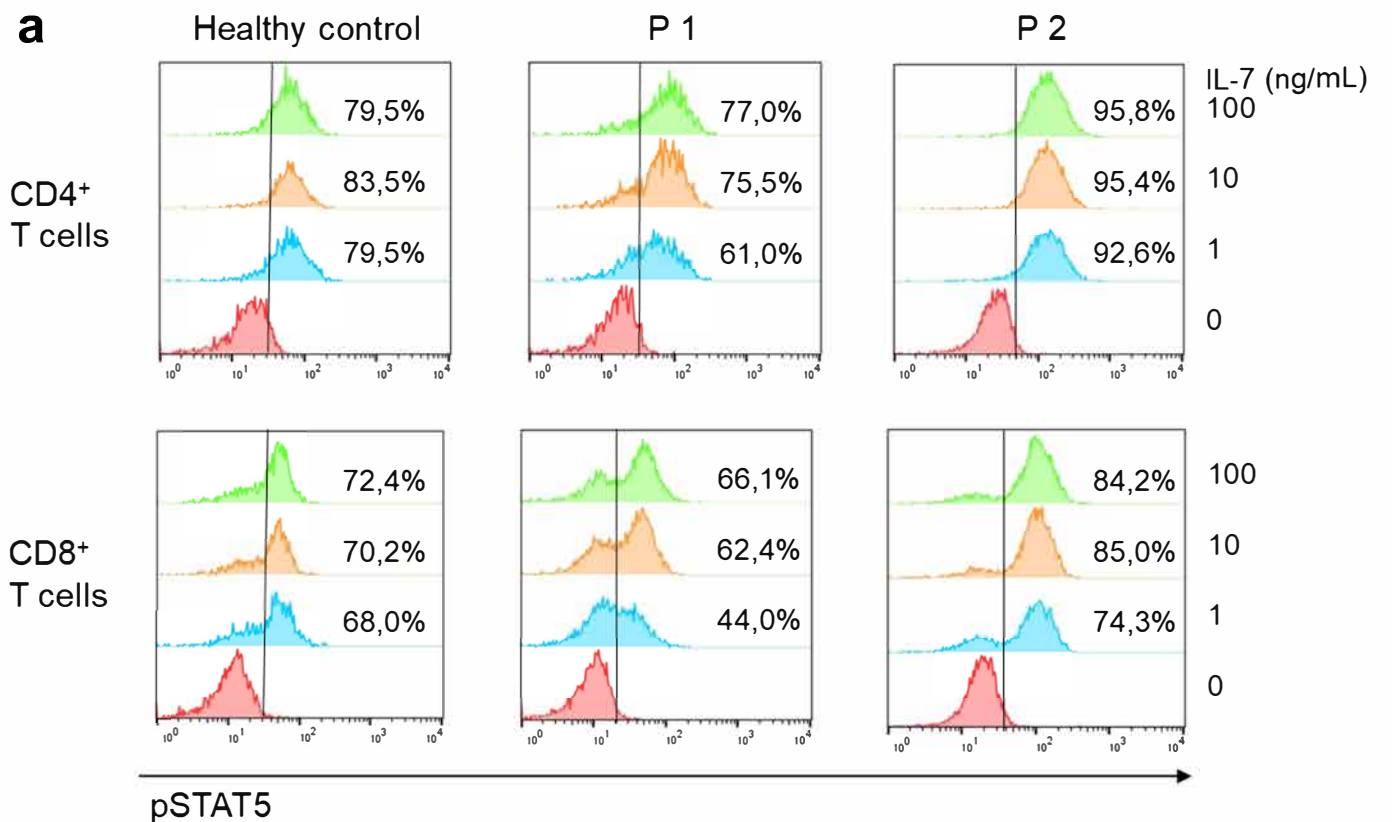


Figure S1. STAT5 phosphorylation with (a) IL-7 and (b) IL-15 using 1, 10, and 100 ng/mL. No significant difference could be observed in STAT5 phosphorylation from patient cells compared to an age-matched healthy control.

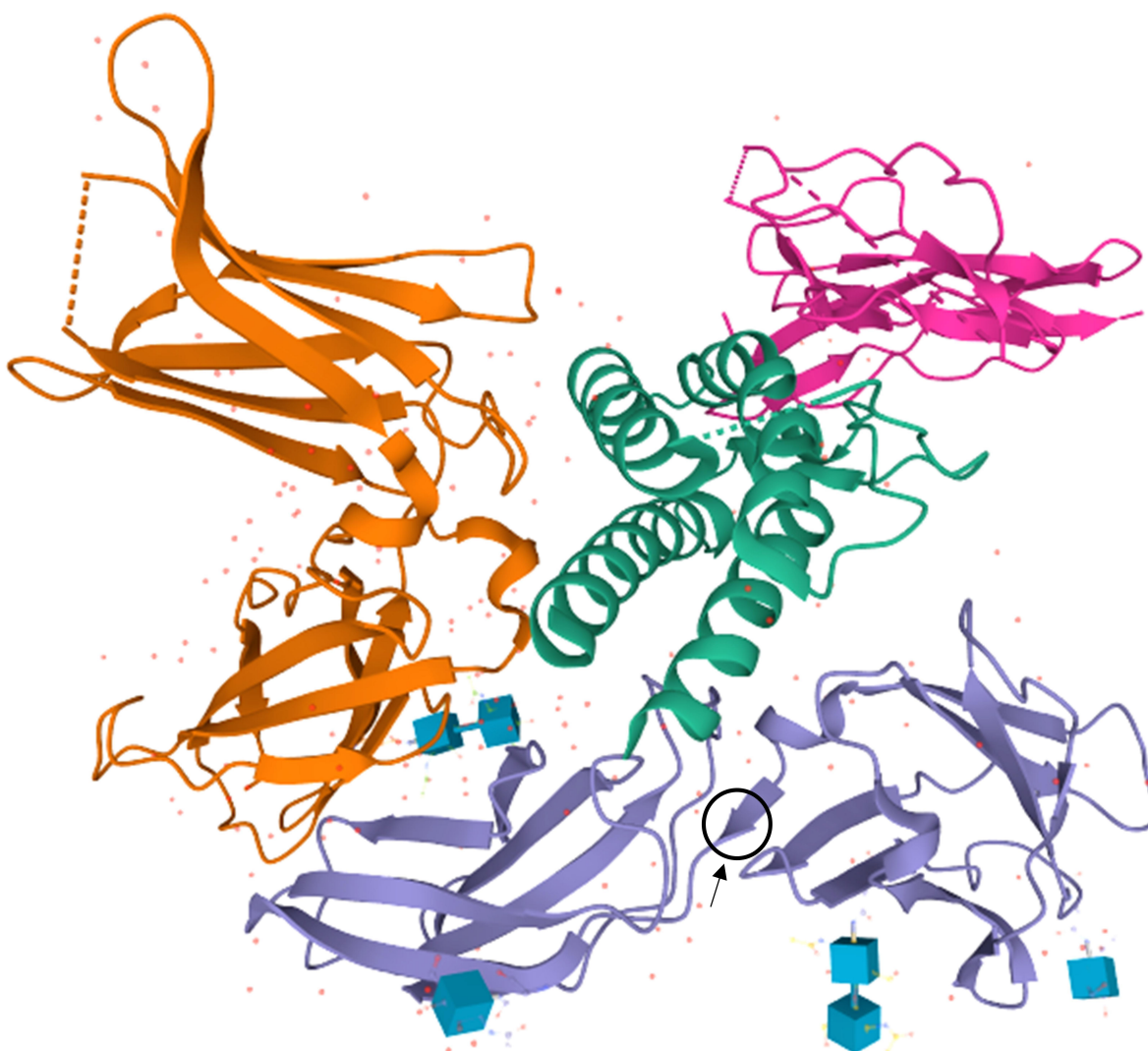


Figure S2. 3D visualization of the molecular interaction of IL-2 binding to IL-2 receptor. IL-2 is depicted in green, IL2RA in blue, IL-2RB in orange and IL-2RG in purple. Isoleucine 153 from IL-2RG (included in a  $\beta$ -sheet motif) is highlighted. The image was generated with Mol\* Viewer application [38] in RCSB PDB (PDB ID: 2B5I [27]). The structure was analyzed by X-ray diffraction (2.30 Å of resolution) by Wang et al. [27].