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Supplementary information

Disrupting Roquin-1 interaction with Regnase-1 induces autoimmunity and enhances antitumor responses

In the format provided by the authors and unedited

Genotype			Roquin-1/2 DKO^{T}	Regnase-1 KO^{T}	Roquin-1/2 Regnase-1 TKO^{T}
Cd4-Cre deletion (homeostasis)	**CD4^{+} T cells**	activation	EM	EM/CM	EM/CM
		T_{FH} cells (%)	++	+	+++
		Treg cells (%)	+++	+++	++
		glycolytic activity	++	++	+++
		mitochondrial respiration	+	++	+++
	GC B cells		+	++	+++
	ANAs		unchanged	+++	++
	CD8^{+} T cells	activation	EM	EM/CM	EM
		glycolytic activity	++	++	+++
		mitochondrial respiration	+	++	(++)
		ICOS	+	++	++
		CD38	++	+	++
		IFN-γ+ TNF+	+++	+++	+++
		IL-2	unchanged	+++	+
		Granzyme B	+++	+	++
		KLRG1	+++	+	+
		BATF	+	+	+
		TCF-1	↓↓↓	↓	↓↓↓
		CXCR5	unchanged	+	+
		Tim-3	++	+	+
		PD-1	++	+	+
		CTLA-4	+	+	++
		in vitro killing	+++	+	n.d.
adoptive transfer of CD4^{+} T cells; acute deletion (*Cd4*-Cre-ERt2)			proliferation but no long-term persistence	proliferation and long-term persistence; induction of ANAs	proliferation but no long-term persistence
adoptive transfer of CD8^{+} OTI T cells in the B16-OVA melanoma model			enhanced anti-tumor response	enhanced anti-tumor response	n.d.

Supplementary Table 1: Summary of Roquin and Regnase knock out phenotypes in different cell types and experimental settings. n.d.: not determined, EM: effector memory, CM: central memory, GC: germinal center, ANA: anti-nuclear antibody.

Name	Sequence (5' - 3')	UPL probe
Icos for	AACCTTAGTGGAGGATATTTGCAT	33
Icos rev	CTACGGGTAGCCAGAGCTTC	33
Tnfrsf4 for	GCTTGGAGTTGACTGTGTTCC	79
Tnfrsf4 rev	GGGTCTGCTTTCCAGATAAGG	79
Ywhaz for	CGCTAATAATGCAGTTACTGAGAGA	2
Ywhaz rev	TTGGAAGGCCGGTTAATTTT	2
Zc3h12a for	GAAGCAATGTGGCCATGAG	76
Zc3h12a rev	CCTCGCTCCAGAAACCAG	76

Supplementary Table 2: DNA oligonucleotides and probes from the Universal Probe Library (UPL) system (Roche) used for RT-qPCR analyses.