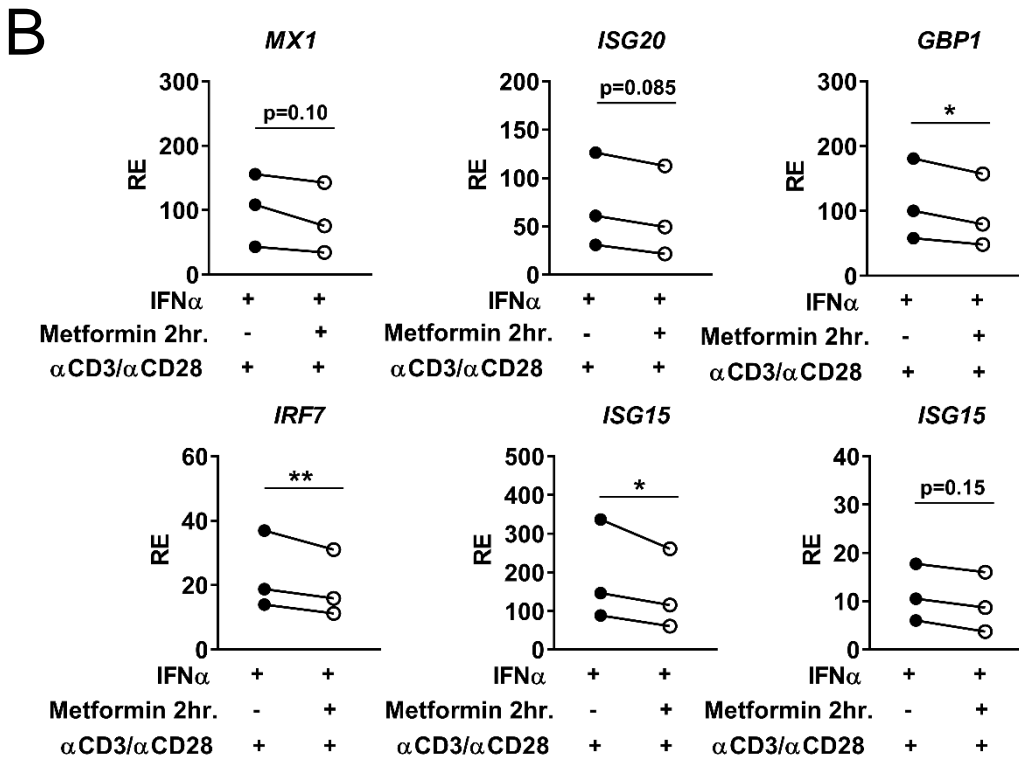
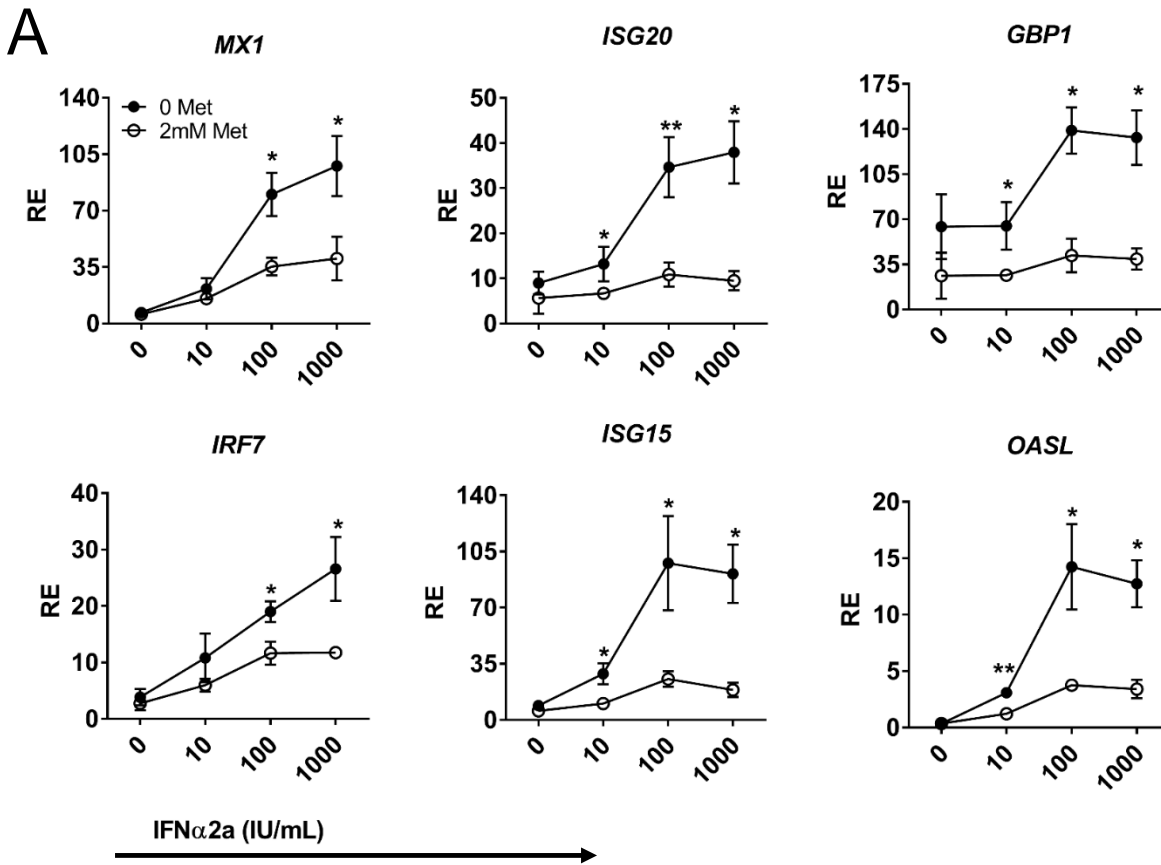


**Supplemental Figure 1.** Purity of CD4+ and CD19+ cell isolation and viability of CD4+ T cells after culture with metabolic inhibitor drugs. (A) Representative flow cytometry plots of whole blood before isolation and post-Rosette Sep CD4+ enrichment (B) Representative flow cytometry plots of PBMCs isolated by density centrifugation before isolation and post EasySep CD4+ enrichment (C) Representative flow cytometry plots of PBMCs isolated by density centrifugation before isolation and post CD19+ enrichment. (D) Representative viability stain of HD CD4+ T cells stimulated with anti-CD3 $\epsilon$ /anti-CD28 and treated for 24 h with 2 mM metformin or 100nM of either rotenone, antimycin-a, or oligomycin.



**Supplemental Figure 2.** IFN $\alpha$ 2a dose titration in HD CD4<sup>+</sup> T cells and 2 h metformin co-treatment. **(A)** 3 concentrations of IFN $\alpha$  were tested in CD4<sup>+</sup> T cells stimulated with anti-CD3 $\epsilon$ /anti-CD28 with or without metformin for 24 h and treated with recombinant IFN $\alpha$ 2a for the final 2 h (1 IU = 4 pg/mL). The graphs show means and standard deviation of three technical replicates. **(B)** Effect of 2 h metformin and IFN $\alpha$ 2a co-treatment on the expression of 6 ISG genes in HD CD4<sup>+</sup> T cells (N = 3). Paired t-tests used for (A, B). \*  $p < 0.05$ , \*\*  $p < 0.01$ .

**Supplemental Table 1.** Primer sequences for gene expression studies and ChIP assays.

<b>qRT-PCR Gene</b>	<b>Sequence</b>	<b>Product (bp)</b>
<i>MX1</i> F	AGGCAAGGTCAGTTACCAGG	89
<i>MX1</i> R	CGATGGCATTCTGGGCTTTATT	
<i>ISG20</i> F	CACAAGAGCATCCAGAACAGC	63
<i>ISG20</i> R	CATCGTTGCCCTCGCATCTT	
<i>GBP1</i> F	GGCTATGGACCAACTGTACTAT	215
<i>GBP1</i> R	TCAGCTTCAGGGAGTATGTCAG	
<i>IRF7</i> F	GAGTCTTCTTCCAAGAGCTGGT	68
<i>IRF7</i> R	GATGGTATAGCGTGGGGAGC	
<i>ISG15</i> F	GAGAGGCAGCGAACTCATCT	157
<i>ISG15</i> R	CTTCAGCTCTGACACCGACA	
<i>OASL</i> F	GAAGGTAGTCAAGGTGGGCTC	163
<i>OASL</i> R	CTGGCTTTGCCACATGGTTT	
<i>PPIA</i> F	AGCTGTTTACCCCTGATCGTG	71
<i>PPIA</i> R	CCTTGTCTGCAAACAGAAGGC	
<i>HMBS</i> F	AGAATGAAGTGGACCTGGTTGT	81
<i>HMBS</i> R	AGATGGCTCCGATGGTGAAG	
<b>ChIP Target</b>	<b>Sequence</b>	<b>Product (bp)</b>
MX1 promoter 1 F	CCACACGCACAGAAGAGGAA	141
MX1 promoter 1 R	TGCATTTCTGCAAGTCCGT	
MX1 promoter 2 F	CCAGGAGCTAGGTTTCGTTT	118
MX1 promoter 2 R	GCTCTCGCTTCGCCTCTT	
ISG15 promoter 1 F	TACTGCCCTAAACCGAGTGT	178
ISG15 promoter 1 R	TATCGCGCATTCCAGATCCTT	
ISG15 promoter 2 F	CGCCACTTTTGCTTTTCCCT	88
ISG15 promoter 3 R	TTCGGTTTCCCTTCCCGAG	
Gene Desert 2 F	AGGAGACACCTTGACTCCCAT	126
Gene Desert 2 R	ACTGATCACGGGGTTACAGC	