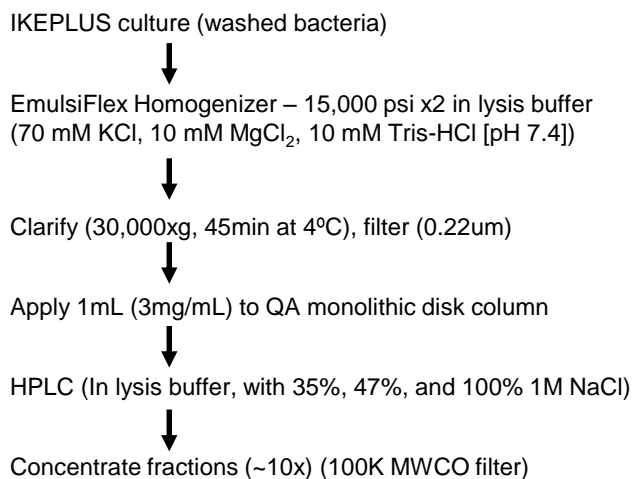


Peptide #	Rv #	Residue #	Sequence
1	Rv0640	12-26	KLQIVAGQANPAPPV
2	Rv0640	67-81	SFTFTLKTTPPAKLL
3	Rv0651	68-82	GLDELFVGPTAIAFV
4	Rv0651	146-160	KAAGLFNAPASQLAR
5	Rv0652	30-44	ETFEVTA AAPVAVAA
6	Rv0670	53-67	IYVHAPY LINLASAN
7	Rv0670	221-235	AAVKAAGAPVICETA
8	Rv0672	11-25	VPPLENYPASSPVL
9	Rv0675	23-37	SRNAVNGPTAAALCA
10	Rv0675	64-78	ADLKAFGTPEANSVH
11	Rv0676c	919-933	LIVRSFMTPSIAALL
12	Rv0688	387-401	VRGKIAAGAPIAEVL
13	Rv0691c	48-62	RTLFRYYASKNAIPW
14	Rv0696	223-237	PHSTVS YVPSAAIVC
15	Rv0696	293-307	RKAFYGGSAAPLAVR
16	Rv0701	25-39	PVTVVKAGPNVVTRI
17	Rv0706	45-59	ILRWAPQAASGPVAK
18	Rv0706	57-71	VAKVIASAAANAQNN
19	Rv0719	104-118	LEFALGYSHPVVIEA
20	Rv0725c	112-126	DARAYRLPWPAGTVV

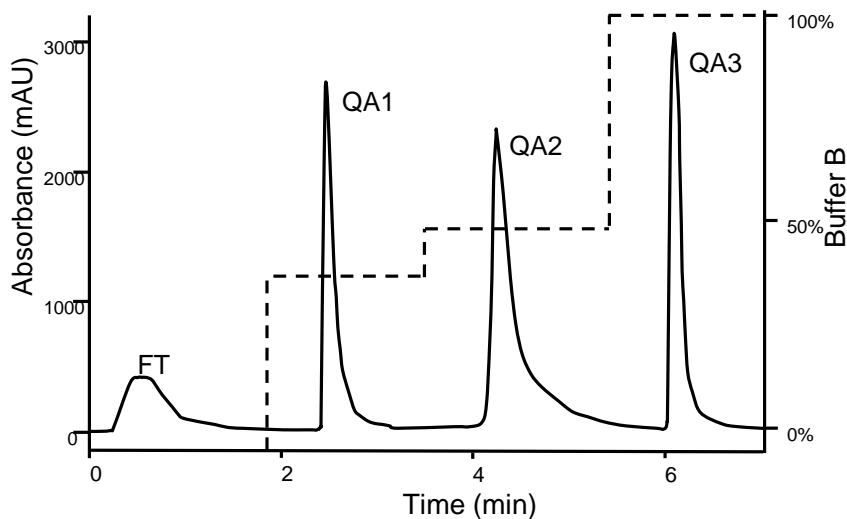
**Table SI. Sequences and locations of peptides included in Pool 12.** The Mtb

(strain H37Rv) gene of origin, residue numbers and sequences are shown for each of the peptides within Pool 12 of the IKEPLUS peptide library (**Fig. 1D**).

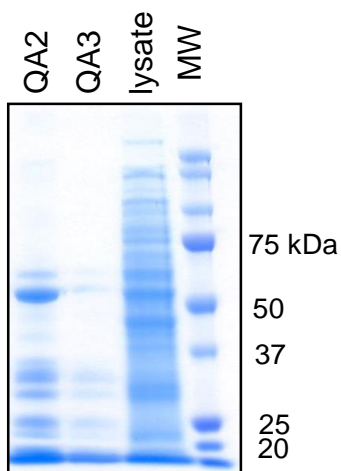
A

**Ribosome Enrichment Protocol:**

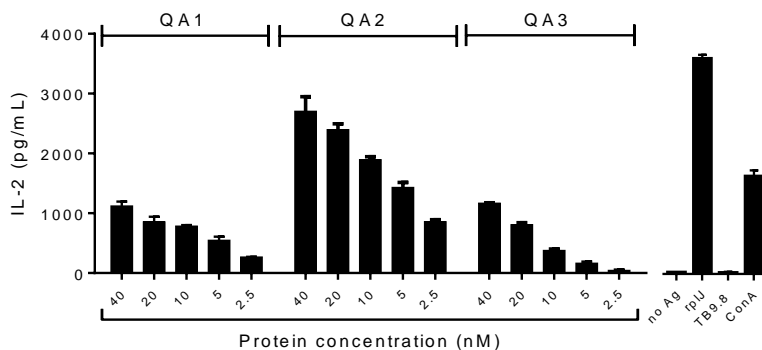
B



C



D



**Figure S1. Characterization of enriched ribosomes from IKEPLUS.**

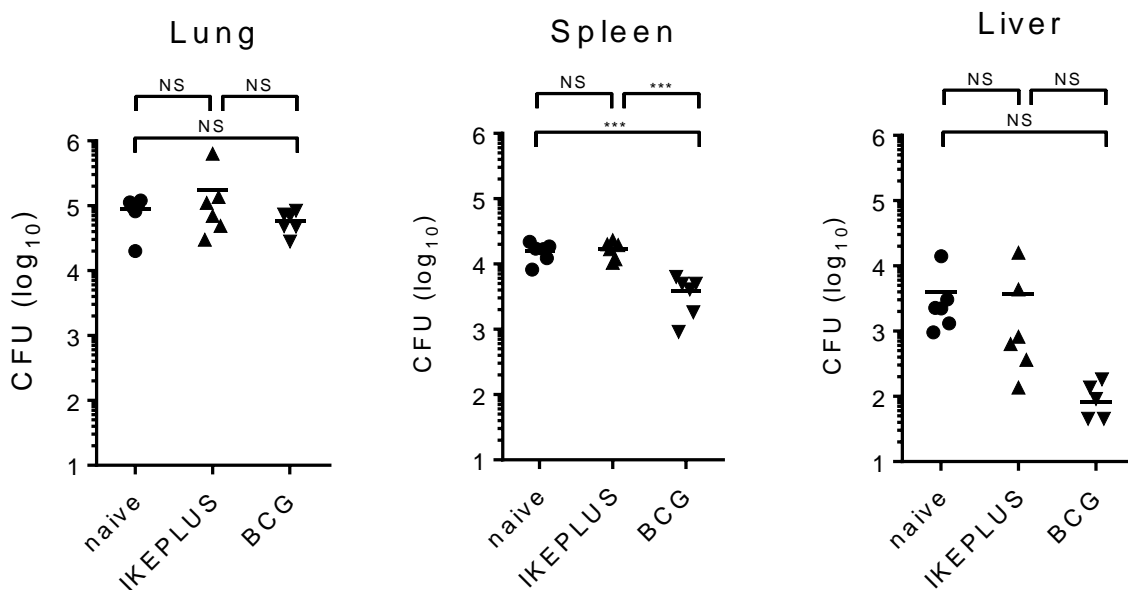
(A) Schematic of the ribosome enrichment procedure used.

(B) Ribosomes were enriched from IKEPLUS using a standard HPLC ion exchange and size separation method. Isolations were performed at a flow rate of 2 mL/min, using lysis buffer (Buffer A) and lysis buffer containing 1M NaCl (Buffer B). Sequential elutions with 35% (fraction QA1), 47% (QA2), and 100% (QA3) buffer B were collected and further analyzed.

(C) Fractions QA2 and QA3, as well as IKEPLUS lysate, were also analyzed by SDS-PAGE and visualized with Coomassie blue staining.

(D) IL-2 ELISA was also used to examine fractions QA1, QA2, and QA3 for ribosomes by culturing the fractions in the presence of APCs and an rplJ<sub>TB146-160</sub>-specific TCH (clone RplJ.03).

Data are mean values and standard errors for duplicate samples.



**Figure S2. Quantification of CFU in immunized mice following Mtb challenge.** Mice (C57BL/6) were immunized with  $5 \times 10^7$  CFU IKEPLUS i.v.,  $10^7$  CFU BCG-Danish s.c., or sham-immunized with saline s.c. (naïve). Ten weeks later, immunized and naïve mice were challenged with low-dose aerosol Mtb strain H37Rv (~100 CFU). Six weeks after challenge, lungs, spleens, and livers were harvested, processed, and quantified as previously described (60).

\*\*\* $p < 0.001$ , and \*\*\*\* $p < 0.0001$  (ANOVA).