

Use of Resuscitation promoting factors to screen for tuberculosis infection in household-exposed children in The Gambia

Additional File 1

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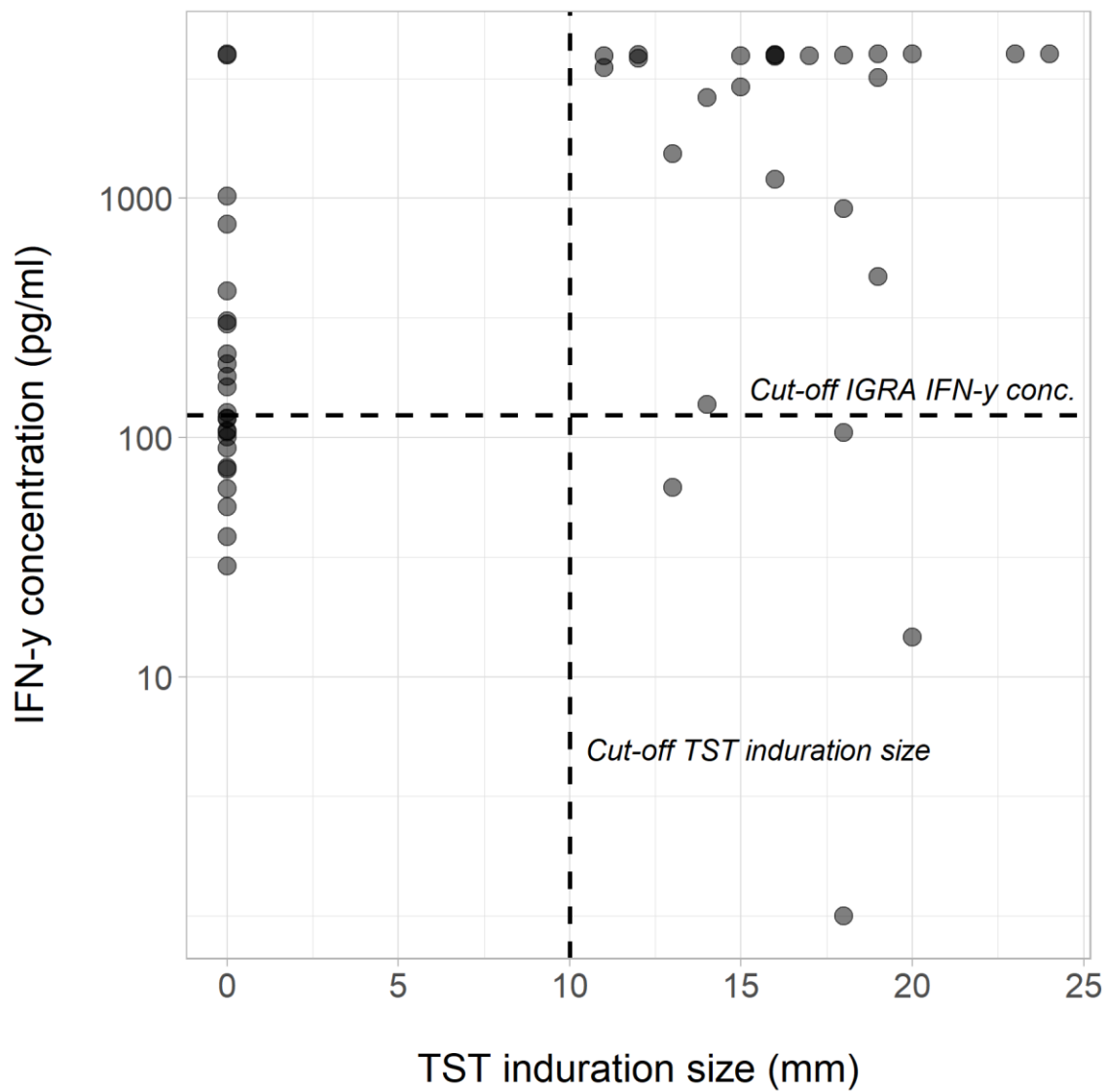
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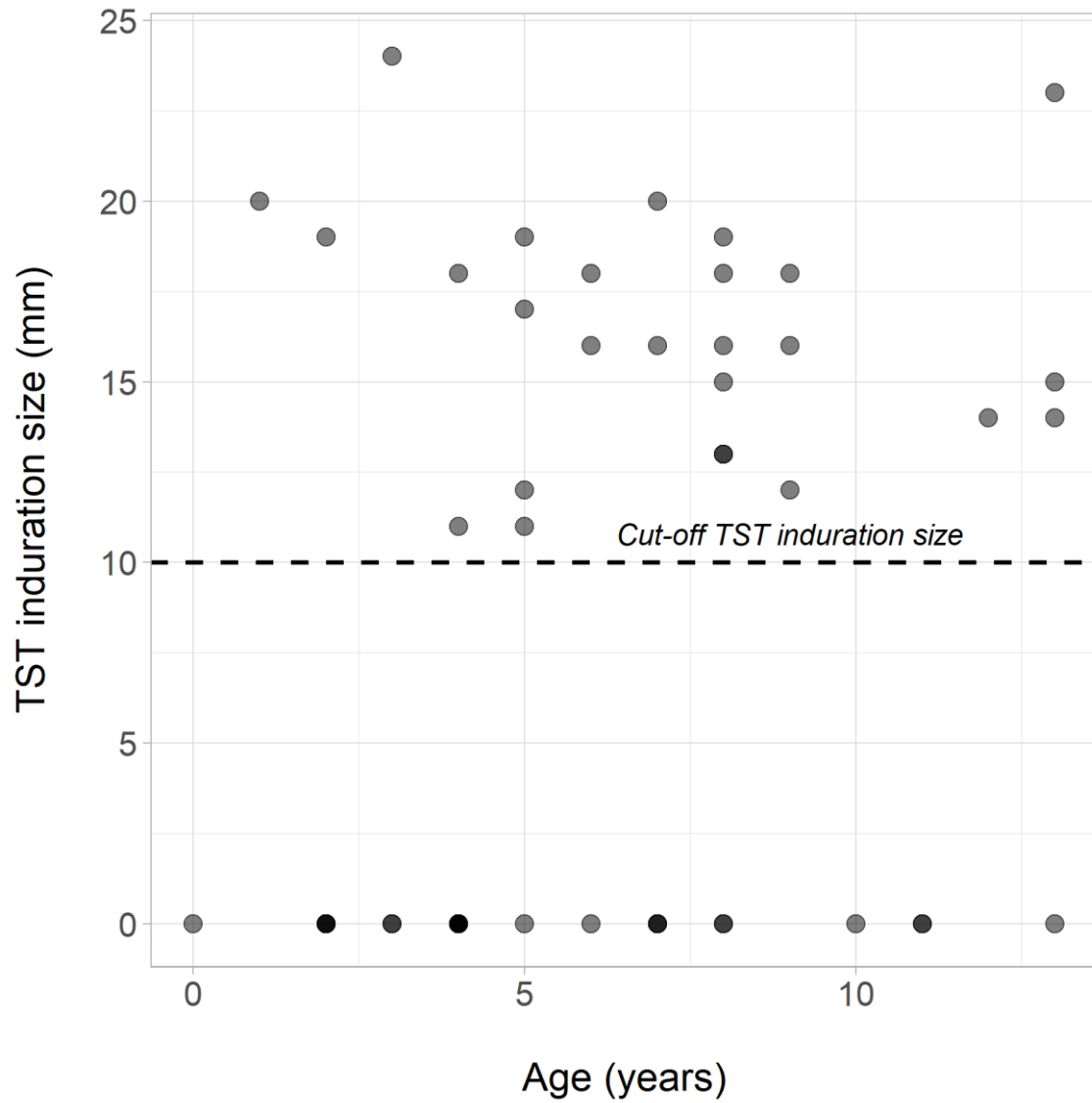
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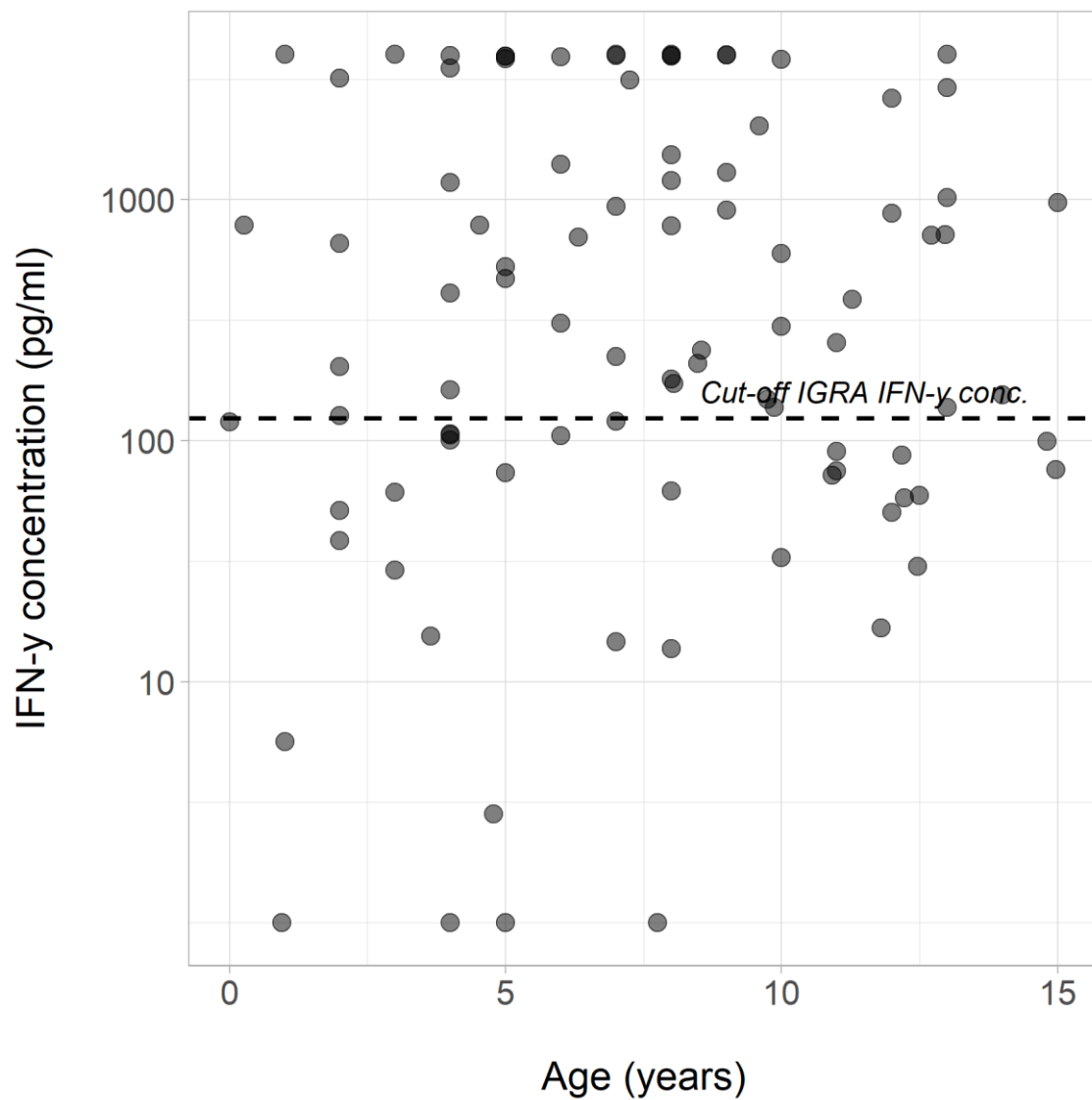
Supplementary Figure 1. TST induration size *versus* IGRA with EC-fusion protein.

IFN- γ concentrations were corrected for the background signal (value of unstimulated IFN- γ level subtracted) and all values above 4000 were set to 4000 pg/mL. TST induration size and IFN- γ were significantly correlated (Spearman's ρ 0.4; $P = 0.0006$). TST = Tuberculin skin test, IGRA = IFN- γ release assay, EC = ESAT-6/CFP-10.



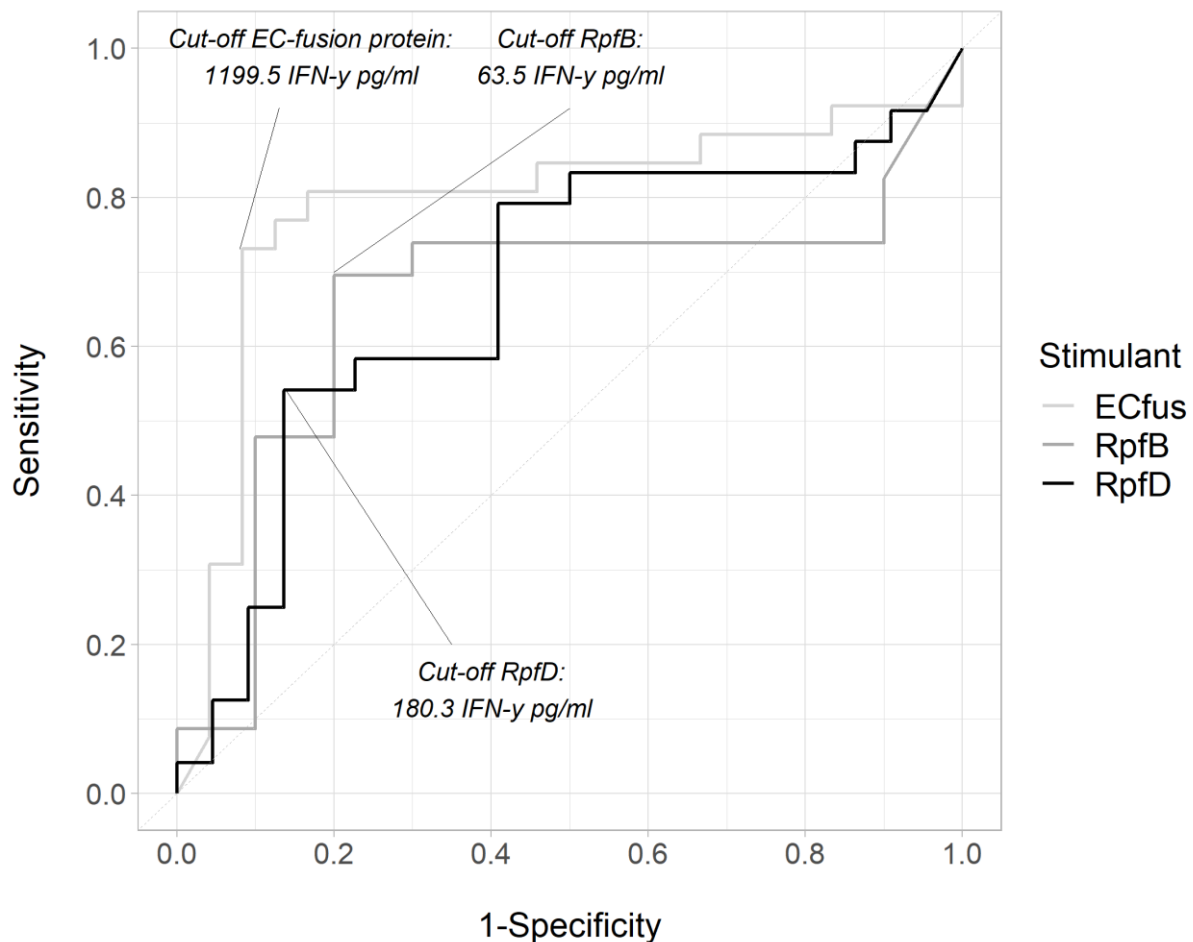
Supplementary Figure 2. TST induration size *versus* age.

TST+ children were significantly older than TST- children (median 7.5 (IQR 5.0-8.8) years versus 4.0 (IQR 3.0-7.3) years; $P = 0.05$). TST = Tuberculin skin test.



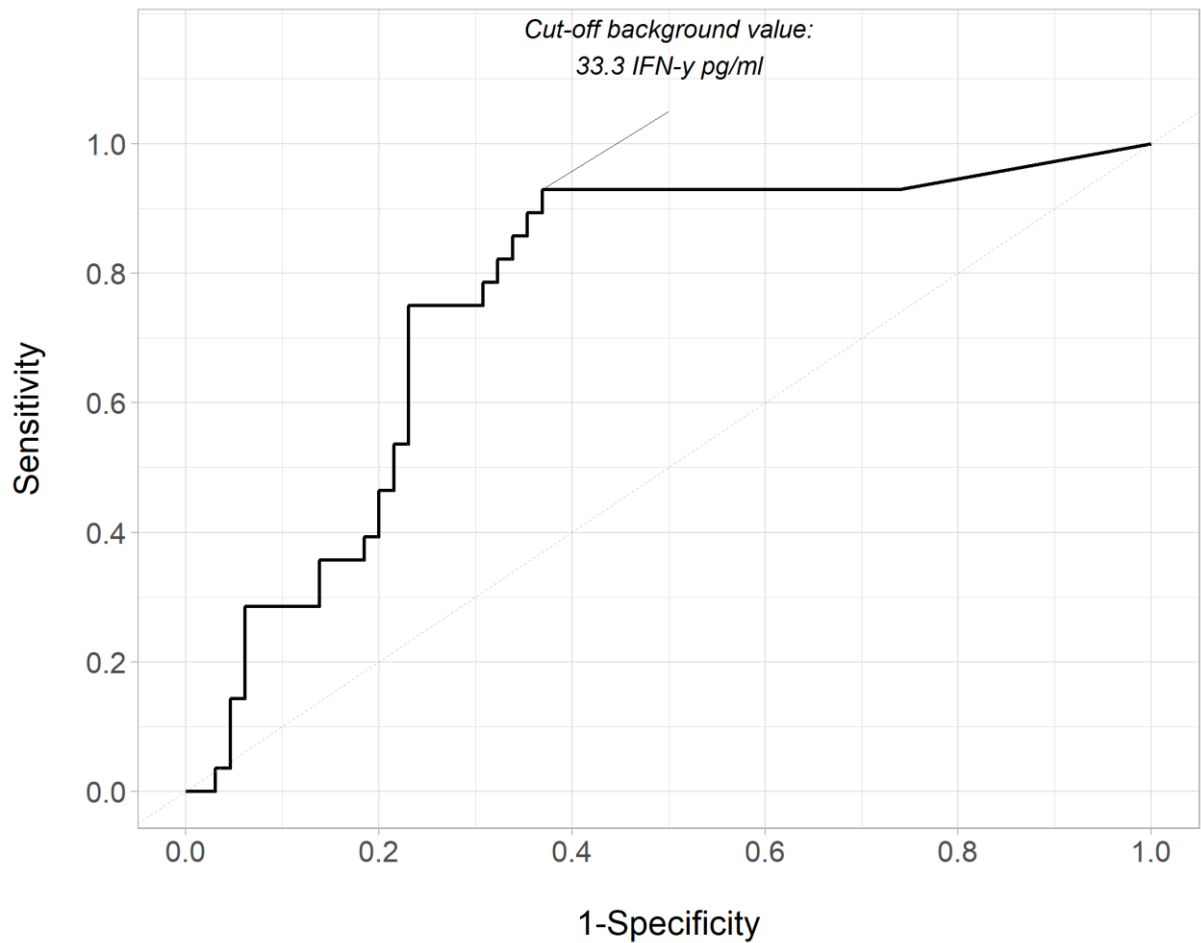
Supplementary Figure 3. IGRA with EC-fusion protein *versus* age.

IGRA+ children were tended to be older than IGRA- children (median 8.0 (IQR 5.0-10.0) years versus median 4.5 (IQR 3.0-8.0) years; $P = 0.06$). IGRA = IFN- γ release assay, EC = ESAT-6/CFP-10.



Supplementary Figure 4. IFN- γ response after *ex vivo* whole blood antigen stimulation using TST as reference standard for MTBC infection.

TST+ participants (filled circle) were classified as infected and TST- participants (open circle) were classified as uninfected. The first panel (a) “medium” depicts the results of the unstimulated assays, i.e., the background level. The other panels (b – h) represent the respective antigen-stimulated assays. Solid lines: median IFN- γ values per infection category. IFN- γ concentrations were corrected for the background signal (value of unstimulated IFN- γ level subtracted), except for the results in the first panel “medium”. All values above 4000 were set to 4000 pg/mL. P-values below 0.05 indicated. P-values were derived from logistic regression models including possible confounders age and sex, after log-transformation of the IFN- γ variable. EC = Esat-6/CFP-10, PPD = Purified protein derivative, Rpf = Resuscitation promoting factor, TST= Tuberculin skin test.



Supplementary Figure 5. ROC-curve for background (*i.e.*, unstimulated) IFN- γ level for diagnosis of TB disease.

TB disease was diagnosed by mycobacterial confirmation and/or clinical diagnosis.

Participants without TB disease could still be infected or symptomatic. AUC is 0.77 Cut-off value for IFN- γ level was based on the Youden Index. The cut-off was set to 33.3 and led to 92.9% sensitivity and 63.1% specificity. ROC = Receiver operating curve, AUC = area under the curve.