Methods for detecting an infection with Mtb in a subject are disclosed. The methods include detecting the presence of CD8.sup.+ T cells that specifically recognize an Mtb polypeptide. The methods include in vitro assays for detecting the presence of CD8.sup.+ T cells in a biological sample, and in vivo assays that detect a delayed type hypersensitivity reaction. The methods also include detecting Mtb polypeptides and polynucleotides.