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Title: Role of the macrophage-inducible C-type lectin Mincle in the lung host defense against mycobacterial infections in mice

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Body: The macrophage-inducible C-type lectin Mincle has been identified as receptor for the mycobacterial cell wall component trehalose dimycolate (TDM) of *M. tuberculosis*. We here examined the role of Mincle in lung protective immunity against mycobacterial pathogens in mice. We found that mice infected with *M. bovis* BCG responded with a delayed expression of Mincle on alveolar macrophages by days 14-21 post-challenge. In line with this finding, we observed that Mincle KO mice showed significantly reduced proinflammatory cytokine release and alveolar leukocyte recruitment as well as increased mycobacterial loads particularly in lung draining lymph nodes and spleens relative to wild-type mice infected with *M. bovis* BCG. Importantly, flow-sorted alveolar macrophages of wild-type mice responded with substantially greater proinflammatory TNF- α , KC, CCL2 and CCL5 mRNA levels to infection with *M. bovis* BCG relative to alveolar macrophages of BCG-infected Mincle KO mice. Together, the current study shows that Mincle exhibits delayed cell surface expression kinetics on alveolar macrophages upon *M. bovis* BCG challenge, thus acting as a 'delayed-type' regulator of proinflammatory macrophage activation during mycobacterial infections.