

Table SI. Characteristics of the studies on Mincle in pneumonia.

Author(s), year	Animals /cells	Model	Infection	Time after infection	Detection	Detection indicators	Results	(Ref.)
Ishikawa <i>et al</i> , 2009	WT, Mincle <sup>+/+</sup> , Mincle <sup>-/-</sup> mouse	WT + Emulsion without TDM; WT, Mincle <sup>+/+</sup> , Mincle <sup>-/-</sup> + oil in water emulsion containing TDM (150 µg)	Intravenous	1 day	ELISA	IL-6 and TNF concentrations in the serum	Normal in Mincle <sup>-/-</sup> mice	(4)
				7 days	-	LWI		
				7 days	PCR	TNF, IL-1β, MIP-1α mRNA level		
				7 days	-	Number of lung granulomas		
Behler-Janbeck <i>et al</i> , 2016	WT mouse	PBS (n=3) vs. <i>S. pneumoniae</i> (1x10 <sup>7</sup> CFU/mouse)	NR	6, 12, 24, 48 and 72 h (n=3 mice per time point and treatment group)	PCR	Mincle mRNA level in lung	Mincle gene expression was found to peak in lung tissue of mice at 24 h post <i>S. pneumoniae</i>	(21)

Sharma <i>et al</i> , 2014	Female C57BL/6 mouse Mincle-/- mouse	WT and <i>K. pneumoniae</i> in 20 µl saline	Intranasal	PBS (n=4-6) vs. <i>S. pneumoniae</i> (1x10 <sup>7</sup> NR CFU/mouse)	24h (n=5)	Mincle mRNA level in alveolar macrophages and neutrophils purified from lung tissue	challenge
				6 h, 1 day, 2 days, 3 days, 5 days (n=6-8)	PCR	Mincle mRNA level in lung	Protective role of Mincle in host defense against <i>K. pneumoniae</i> pneumonia by (49) coordinating bacterial clearance mechanisms of neutrophils
				3 days	Lung pathology	-	-
					Flow cytometry	Mincle level in infiltrating lung cells	Mincle was highly expressed on neutrophils

				2 weeks (n=15)	N/A	Survival	Mincle <sup>-/-</sup> mice all succumbed to infection by day 6 after infection	
Rabes <i>et al</i> , 2015	AECs, MVECs and AMΦs were isolated from the lung; PMNs and BMMs from the bone marrow of C57Bl/6 mice	PBS vs. <i>S. pneumoniae</i> ST2	NR	NR	PCR	Mincle mRNA level	Mincle expression is low in AECs and LMVECs, but higher in AMΦs, BMMs and neutrophils	(51)
Hollwedel <i>et al</i> , 2020	C57BL/6J WT mouse  C57BL/6J Mincle tg mouse	19F <i>S. pneumoniae</i> (5x10 <sup>6</sup> CFU/mouse)	NR	6, 24 and 48 h (n=4 per time point)	Flow cytometry	Mincle level in BAL fluids	Mincle expression was significantly upregulated at 6 h post-infection, peaking at 24 h post-infection in Mincle tg group	(50)

C57BL/6J WT mouse		6 and 24 h (n=4)	ELISA	TNF- $\alpha$ , IL-1 $\beta$ , IL-6, MIP-2, and CCL-2 level in BAL fluid and lung tissue	Upregulated in Mincle tg group
	19F <i>S. pneumoniae</i> (1x10 <sup>7</sup> CFU/mouse)				
	NR				
C57BL/6J Mincle tg mouse		4 days (n=4)	H&E	Degree of inflamed lung tissue	On day 4 post-infection, Mincle tg mice developed septic lobar pneumonia.
		10 days (n=4)	-	Survival	Increased mortality with early onset (day 3 post-infection) in Mincle tg mice

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WT, wild-type; Mincle, macrophage-inducible C-type lectin receptor; tg, transgenic; TDM, trehalose-6,6'-dimycolate; IL, interleukin; TNF, tumor necrosis factor; LWI, lung weight index; MIP-1 $\alpha$ , macrophage inflammatory protein-1 $\alpha$ ; CFU, colony-forming units; AECs, alveolar epithelial cells; MVECs, microvascular endothelial cells; AM $\Phi$ s, alveolar macrophages; PMNS, polymorphonuclear neutrophils BMMs, bone-marrow macrophages; BMDCs, bone marrow-derived dendritic cells; BAL, bronchoalveolar lavage; MIP-2, macrophage inflammatory protein-2; CCL-2, chemokine (C-C motif) ligand 2; H&E, hematoxylin and eosin; NR, not reported; NA, not applicable.

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