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Opposite effects of miR-155 in the initial and later stages of lipopolysaccharide (LPS)-induced inflammatory response

Key words: Toll-like receptor 4 (TLR4); Endotoxin tolerance; miR-155; SOCS1; TAB2

Research Article

This manuscript mainly focused on the role of miR-155 and its target genes in LPS induced inflammatory, and summarized the key roles they played in the following aspects:

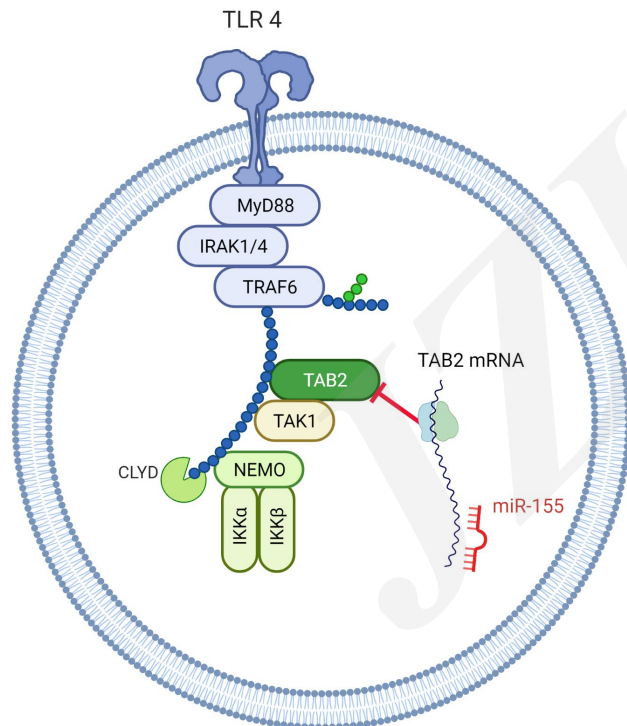
miR-155 acted as an anti-inflammatory mediator through repressing TAB2 in the initial stage of LPS-induced inflammatory response

miR-155 acted as a pro-inflammatory mediator by down-regulating SOCS1 in the later stage

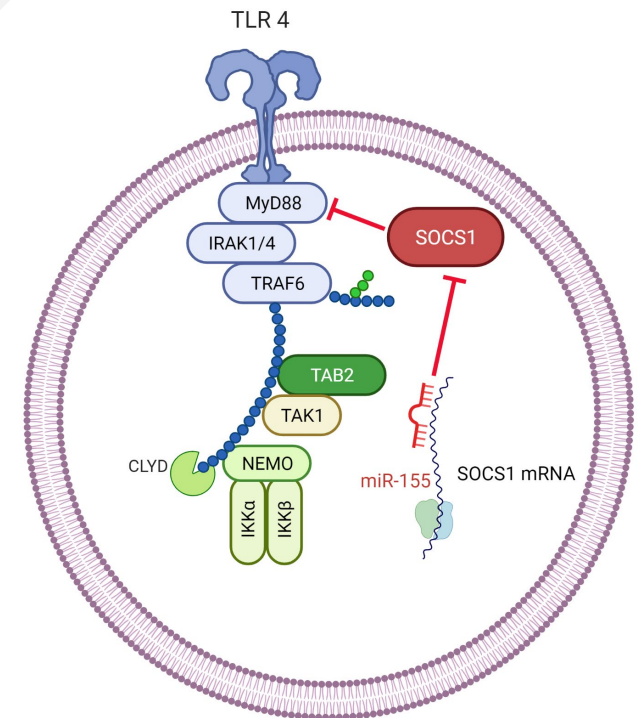
TAB2 promoted the development of endotoxin tolerance by competing with SOCS1 for miR-155

Innovation points

1. miR-155 acted as an anti-inflammatory regulator in the early stage of inflammation, but a pro-inflammatory mediator in the later stage
2. The opposite effects of miR-155 in the early and later stages of inflammation were due to the altered main targets



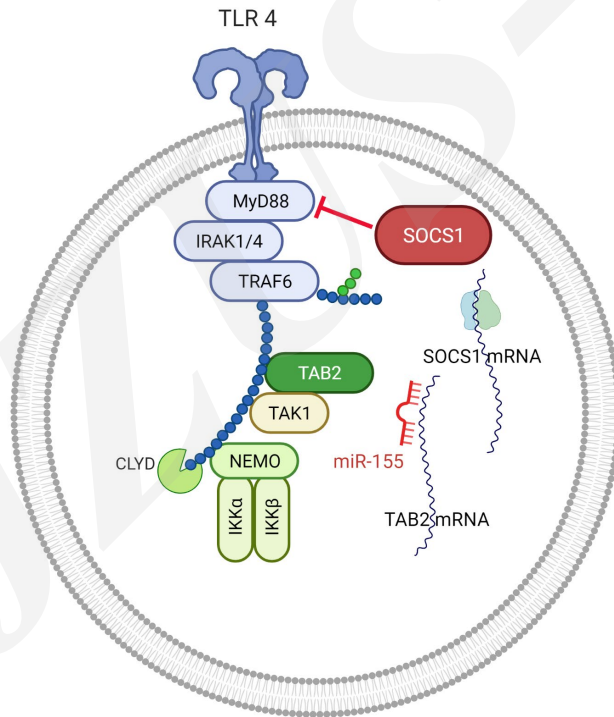
The early stage of inflammation



The early stage of inflammation

Innovation points

3. TAB2 promoted the development of endotoxin tolerance by competing with SOCS1 for miR-155



The development of endotoxin tolerance