

Microglia polarization

Microglia are polarized to the **M2 microglia** phenotype following stimulation with **interleukin 4** or **interleukin 13**, which are typically released from **Th2 cells**. M2 microglia secrete anti-inflammatory cytokines and growth factors that promote attenuation of the inflammatory response and repair of damaged tissue.

Sterile alpha and HEAT/Armadillo motif (SARM), a member of the Toll-interleukin-1 receptor (TIR) domain-containing adaptor family, is primarily expressed in the central nervous system. However, the role of SARM in glioma is still undefined. Zhou et al. examined the function of SARM in **microglia** polarization and **glioma progression**. The results showed that forced the expression of SARM in **GL261** glioma cells inhibited tumor growth, and reduced **interleukin 6** secretion in conditioned media. Silencing of SARM in **microglia** cells inhibited **interleukin 4** -induced **M2 microglia** polarization and enhanced lipopolysaccharide-induced **M1 microglial** polarization. Furthermore, overexpression of SARM increased the migration of **microglia** cells upon **TGFβ** stimulation. These data suggested that SARM is involved in **neuroinflammation** and **microglia activation**. This study provides novel insight into the mechanisms of **microglia** polarization ¹⁾.

¹⁾

Zhou C, Li T, Dong Q, Liang H, Xu L. SARM suppresses glioma progression in GL261 glioma cells and regulates microglial polarization. Cell Biol Int. 2022 Aug 16. doi: 10.1002/cbin.11881. Epub ahead of print. PMID: 35971755.

From:

<https://neurosurgerywiki.com/wiki/> - **Neurosurgery Wiki**

Permanent link:

https://neurosurgerywiki.com/wiki/doku.php?id=microglia_polarization

Last update: **2024/06/07 02:58**

