SIK1

Salt-Inducible Kinase 1 (SIK1).

SIK1 is crucial to regulating alcohol-induced microglial apoptosis, but also that the NF-κB signaling pathway is required for its activity. Overall, the results of Zhang et al., help elucidate mechanisms of alcohol induced neuroinflammation [1].

This gene encodes a serine/threonine protein kinase that contains a ubiquitin-associated (UBA) domain. The encoded protein is a member of the adenosine monophosphate-activated kinase (AMPK) subfamily of kinases that play a role in conserved signal transduction pathways. A mutation in this gene is associated with early infantile epileptic encephalopathy [2].

SIK1 is verified as the direct target of miR 489 and it is negatively regulated by miR-489. ENST01108 also positively regulate SIKI and it promotes SIKI expression by suppressing miR-489. Taken together, the reciprocal repression of ENST011081 and miR-489 may be served as potential targets for cancer therapeutics in glioma [3].

1)
Zhang Y, Gao W, Yang K, Tao H, Yang H. Salt-Inducible Kinase 1 (SIK1) is Induced by Alcohol and Suppresses Microglia Inflammation via NF-κB Signaling. Cell Physiol Biochem. 2018 Jun 19;47(4):1411-1421. doi: 10.1159/000490831. [Epub ahead of print] PubMed PMID: 29929190.
2)
provided by RefSeq, Nov 2016
3)
Xu D, Liu R, Meng L, Zhang Y, Lu G, Ma P. Long non-coding RNA ENST01108 promotes carcinogenesis of glioma by acting as a molecular sponge to modulate miR-489. Biomed Pharmacother. 2018 Feb 5;100:20-28. doi: 10.1016/j.biopha.2018.01.126. [Epub ahead of print] PubMed PMID: 29421578.