

Protective effects of anti-oxidative stress antibody on mice after lipopolysaccharides injection

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LPS-induced endotoxemia in mice has been widely used in experimental research. Endotoxemia induces oxidative stress, leading to the production of different kinds of aldehydes and lipid metabolites. We raised a series of mAb that recognize the specific adducts by those substances. In the present study, we will report the beneficial effects of one mAb against oxidative stress substance (OSS) on endotoxemia mice model.

Endotoxemia was induced in mice by LPS (10mg/kg) injection. The mice were treated with PBS, anti-KLH Ab (1mg/kg) or anti-OSS Ab (1mg/kg) 1 hour after LPS injection. The mice were sacrificed 12h after LPS injection. A variety of biochemical assays were applied to explore the effects of anti-OSS Ab on the endotoxemia mice.

According to our observation, anti-OSS Ab can improve the survival rate of endotoxemia mice and relieve the symptom of inflammatory responses compared with other groups. A panel of pro-inflammatory cytokines in LPS-injected mice, including tumor necrosis factor- α (TNF- α), interleukin-10 (IL-10), IL-6, IL-6R and IL-1 β were attenuated in liver by anti-OSS Ab.

In conclusion, anti-OSS Ab showed protective effects on LPS -injected mice through suppressing the inflammation-related cytokines. Although the mechanism is still unknown, the protective effects of anti-OSS Ab may provide a novel therapy for endotoxemia.