In vivo Pharmacology: Lipopolysaccharide (LPS) Induced Septic Shock in Mice

Species, strain, sex:	mouse, C57Bl/6, male
No. of animals per group:	n=10-15
Pharmacological control:	azithromycin
Routes of administration:	PO, IP, SC, IV, IM
Treatment mode:	prophylactic, therapeutic
Duration of dosing:	upon request

Main read-outs:

- survival

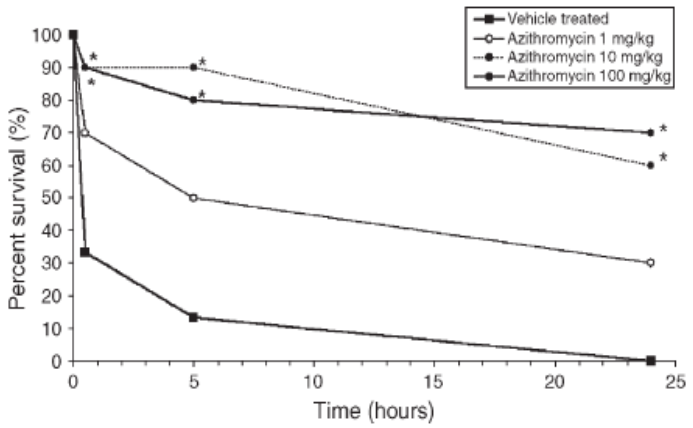
Facultative read outs:

- serum inflammatory mediators

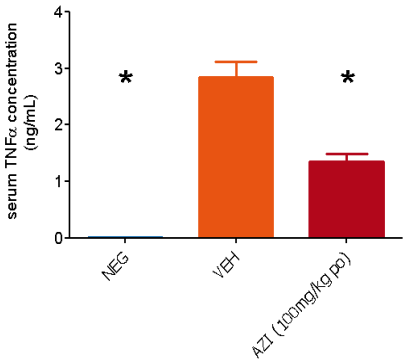
Intraplantar sensitization and intravenous challenge with LPS, a constituent of the cell wall of Gram-negative bacteria, induces production of various inflammatory mediators (TNFa, IL-12p40, CCL5, IL-10, IL-1ra) with subsequent lethal outcome of experimental animals.

The anti-inflammatory activity of test compounds is evaluated by survival monitoring (main read-out) or by measuring concentration of inflammatory mediators (facultative read-out).

Effect of Azithromycin on survival rate in LPS-induced septic shock



Effect of Azithromycin on serum TNF-a concentration in LPS-induced inflammation



*p<0,05 vs. Veh; Kruskal-Wallis with Dunn's multiple comparison test

References

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Ivetić Tkalčević V, Hrvačić B, Pašalić I, Eraković Haber V, Glojnarić I. Immunomodulatory effects of azithromycin on serum amyloid A production in lipopolysaccharide induced endotoxemia in mice. *J Antibiot* (Tokyo) (2011) 64:515

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