

IL-23-induced Psoriasis Efficacy Studies-Mouse Acute

Psoriasis is a very common skin disease that affects more than 3 million people in the US alone. It is characterized by plaque and erythema patches on the skin. Recently, the IL-23/Th17 pathway has been shown to play a major role in psoriasis pathogenesis making further mechanistic research a necessity. The IL-23- induced psoriasis model is an ideal system with which to study this interplay.

IL-23 stimulates and promotes differentiation of Th17 cells. IL-23 is a heterodimeric cytokine with two subunits. It drives the Th17 response by its binding and signaling through its receptor subunits. When the IL-23R is activated, it promotes the development of Th17 cells and the resulting production of cytokines such as IL-17F and IL-22 - all which are involved in mediating psoriasiform changes.

Experimental Overview

Psoriasis is induced by 4 day intradermal (i.d.) IL-23 injection into the right ear of anesthetized animals. A PBS control group is used to as an injection control. Ear thickness, clinical score and body weight are measured daily for 5 days.

- Animal Strain: Balb/c mice
- Study Duration: 5 Days
- Numbers/group: 10
- Positive Controls: Clobetasol-topical
Dexamethasone-IP/PO

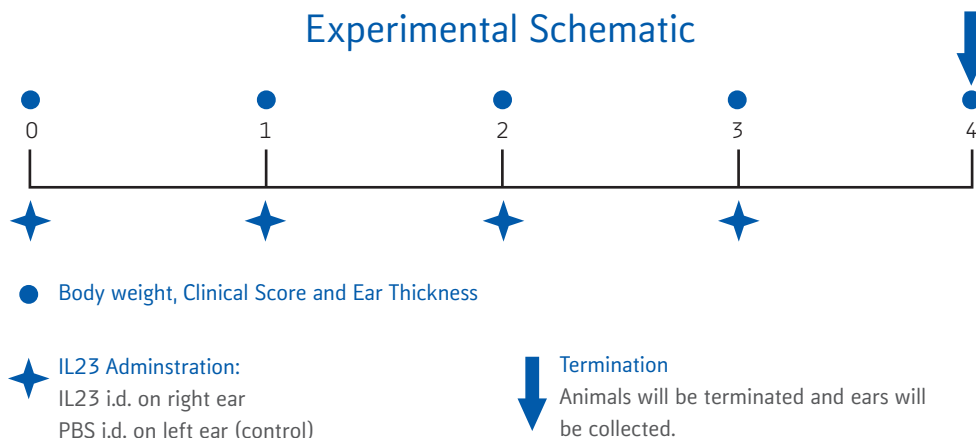
Standard Assessments

- Clinical score/signs
- Ear thickness

Add-on Assessments

- Collagen levels
- Biomarker analysis
- Histology/IHC

Experimental Schematic



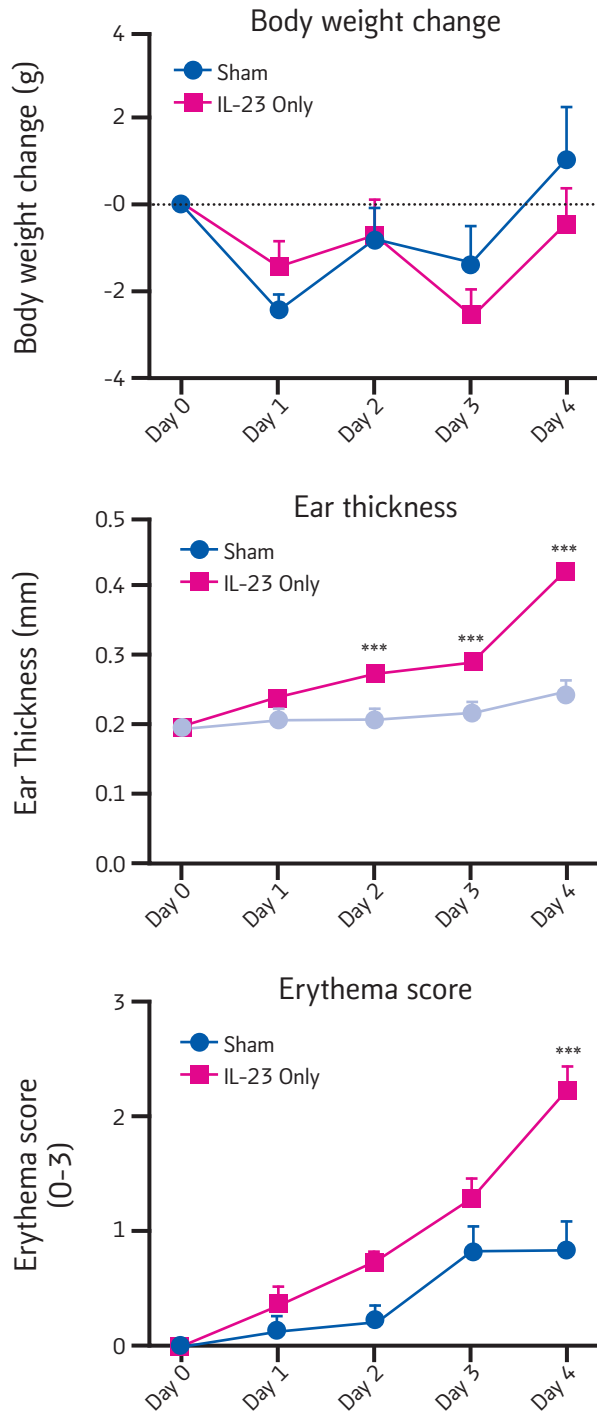


Figure 1: Representative data from a 5 Day mouse study where animal ears are injected with PBS (Sham) or IL-23. Group n=10. Top: Body weight change (g). Middle: Ear thickness (mm). Bottom: Erythema score*: p<0.05; **: p<0.01; ***: p<0.001 using two-way ANOVA followed by Dunnett's multiple comparisons.

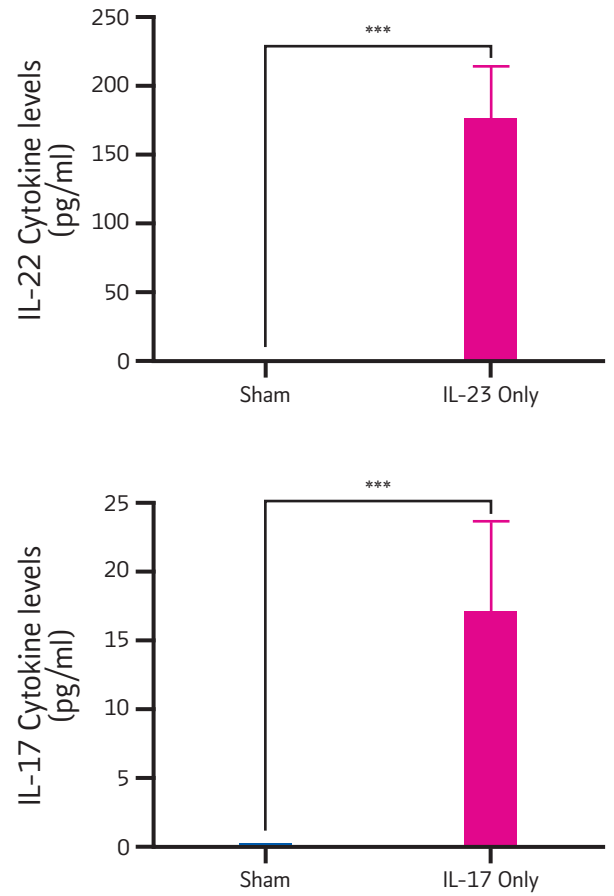


Figure 2: Cytokine protein levels in homogenized mouse ears injected with PBS (Sham) or IL-23. Group n=10. Top: IL-22. Bottom: IL-17F. *: p<0.05; **: p<0.01; ***: p<0.001 vs. using T-Test.

Our Clients Say ...

"The performance of your team far exceeded our expectations. The study was performed well and we appreciate all your input into the study design. Your responsiveness and feedback during the study and following in the data interpretation was extremely helpful to guide our next steps. That's something we don't find with every CRO."

S.G., Toxicologist, Biotech Company

"Of all the CROs that I have used over the years... MLM Medical Labs been one of the very best in terms of scientific knowledge, data quality, timelines, flexibility and personal contacts."

O.B., Director of Therapeutics, Pharmaceutical Company

"Throughout our relationship, you have been attentive to our needs and have completed exploratory pilot studies and three drug studies with professionalism and an understanding of tight biotech timelines that are unmatched by other CROs."

D.Z., Director of Therapeutics, Biotech Company

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If you'd like to discuss a particular study or speak with a scientist, please reach out to us!

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