

hIL4/hIL4R

Nomenclature	C57BL/6Smoc- <i>Il4</i> ^{tm3(hIL4)} <i>Il4ra</i> ^{tm1(hIL4R)Smoc}
Cat. NO.	NM-HU-2000106
Strain State	Repository Live

Gene Summary

Gene Symbol IL4	Synonyms	Il-4; BSF-1
	NCBI ID	16189
	MGI ID	96556
	Ensembl ID	ENSMUSG00000000869
	Human Ortholog	IL4
Gene Symbol IL4Ra	Synonyms	Il4r; CD124
	NCBI ID	16190
	MGI ID	105367
	Ensembl ID	ENSMUSG00000030748
	Human Ortholog	IL4RA
Gene Symbol IL4	Synonyms	BSF-1; Il-4
	NCBI ID	16189
	MGI ID	96556
	Ensembl ID	ENSMUSG00000000869
	Human Ortholog	IL4

Model Description

These mice are obtained through breeding of two single gene humanized mice.

Research Application: Immunotherapy, cancer research, drug screening

*Literature published using this strain should indicate: hIL4/hIL4R mice (Cat. NO. NM-HU-2000106) were purchased from Shanghai Model Organisms Center, Inc..

Validation Data

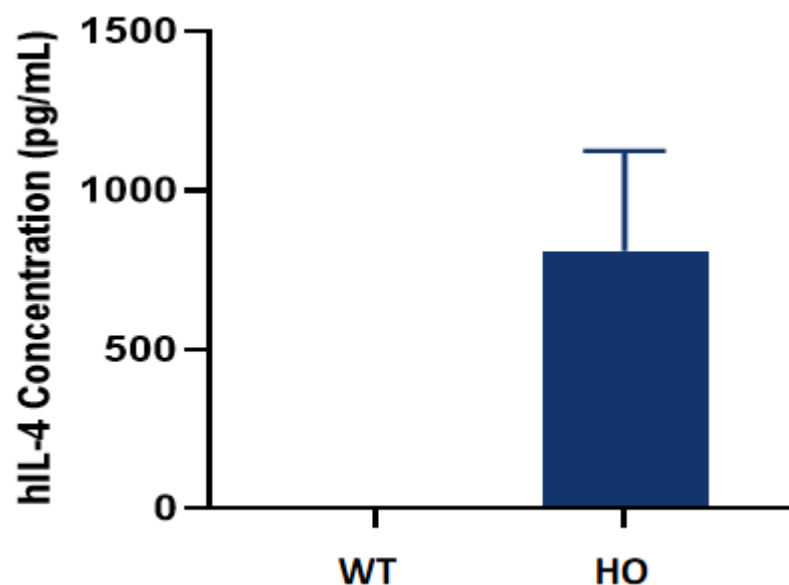


Fig1. Analysis of hIL4 expression in serum by ELISA. The homozygous KI mice express hIL4 in serum after treatment with concanavalin.

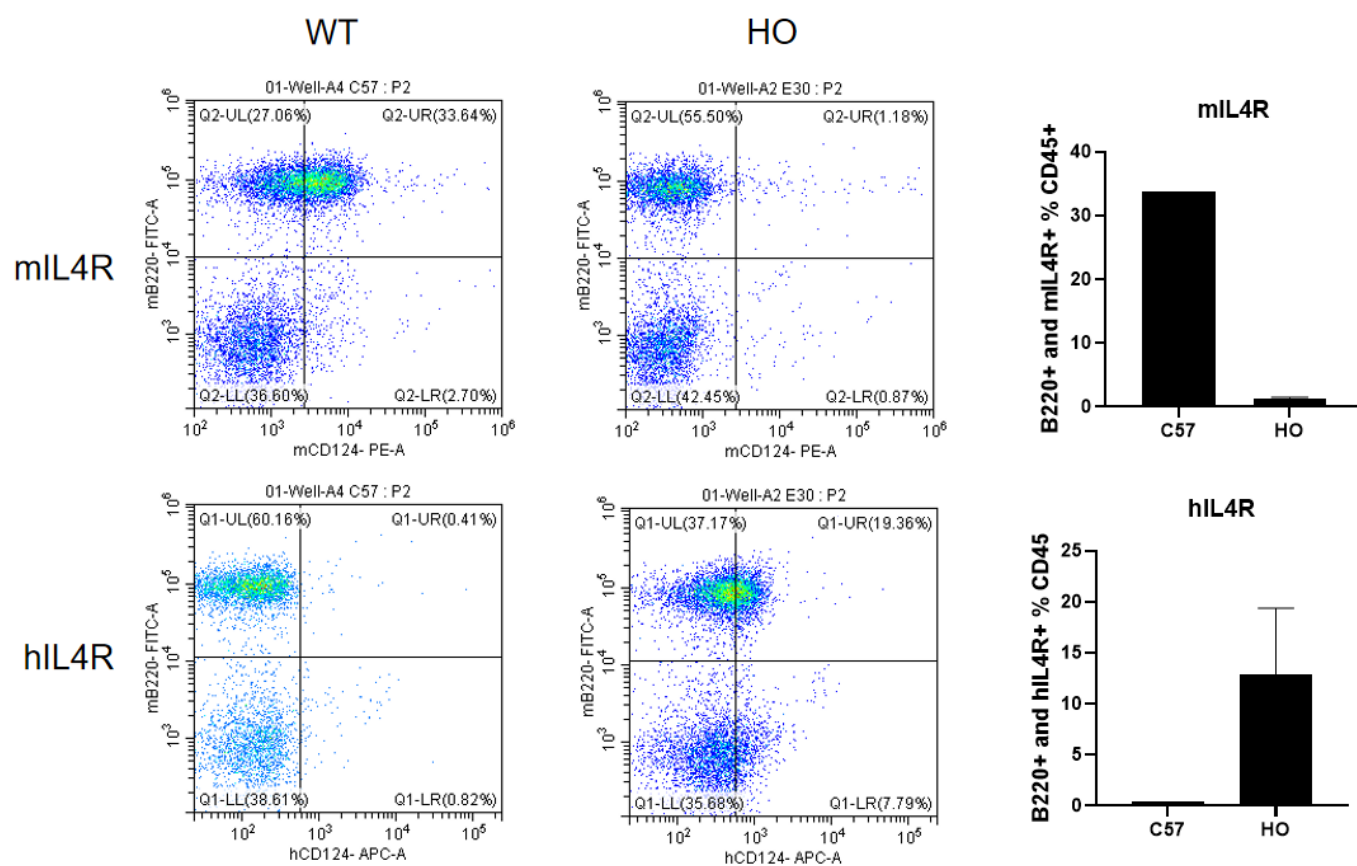


Fig2. Analysis of hIL4R expression in the spleen by FACS. The homozygous KI mice express hIL4R in the spleen, and the WT mice only express mIL4R.

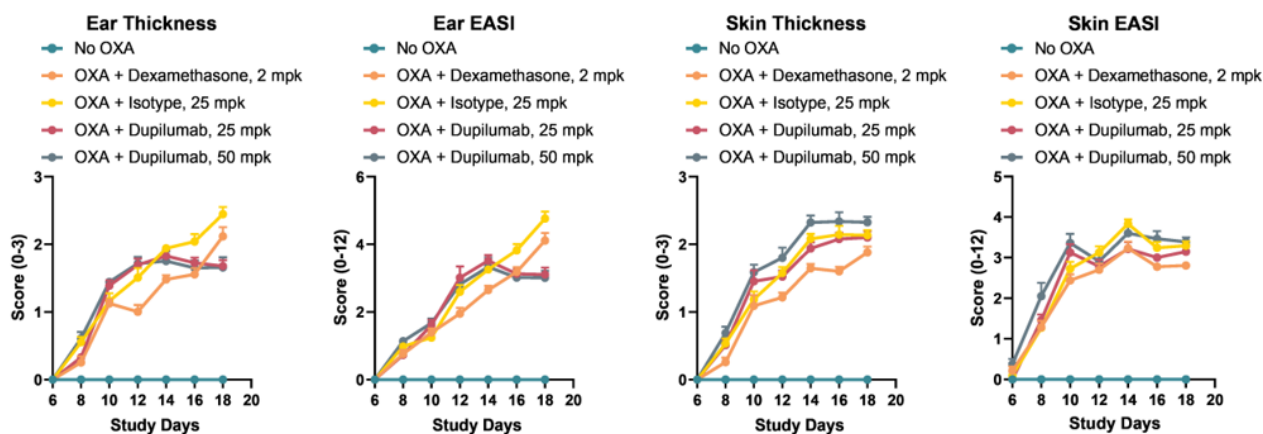


Fig3. Evaluation of an Anti-hiL4Ra mAb in the OXA-Induced Atopic Dermatitis Model in hIL4/hIL4Ra dKI Mice. Both dupilumab and Dexamethasone ameliorate overall atopic dermatitis activity in OXA - challenged ears, but only Dexamethasone worked in back skin. (In cooperation with CrownBio)

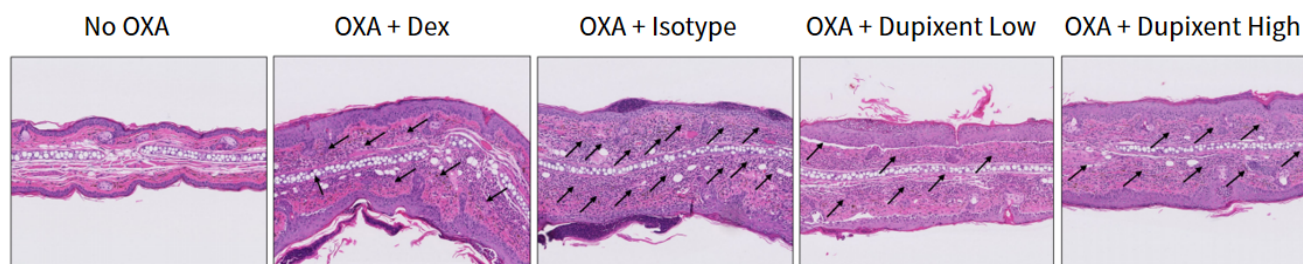


Fig4. Dupilumab significantly mitigates inflammatory cell infiltration in lesioned ear. (In cooperation with CrownBio)

Note: Inflammatory cell infiltration is indicated by black arrows, 10X images

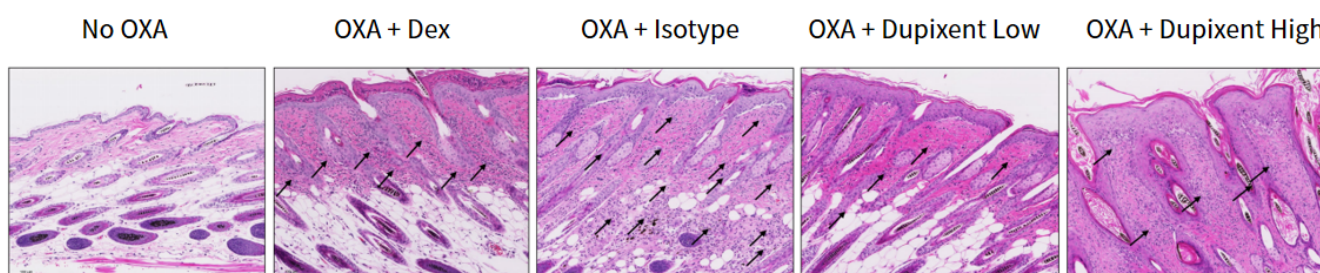


Fig5. Low dose dupilumab significantly mitigates inflammatory cell infiltration in lesioned skin. (In cooperation with CrownBio)

Note: Inflammatory cell infiltration is indicated by black arrows, 10X images

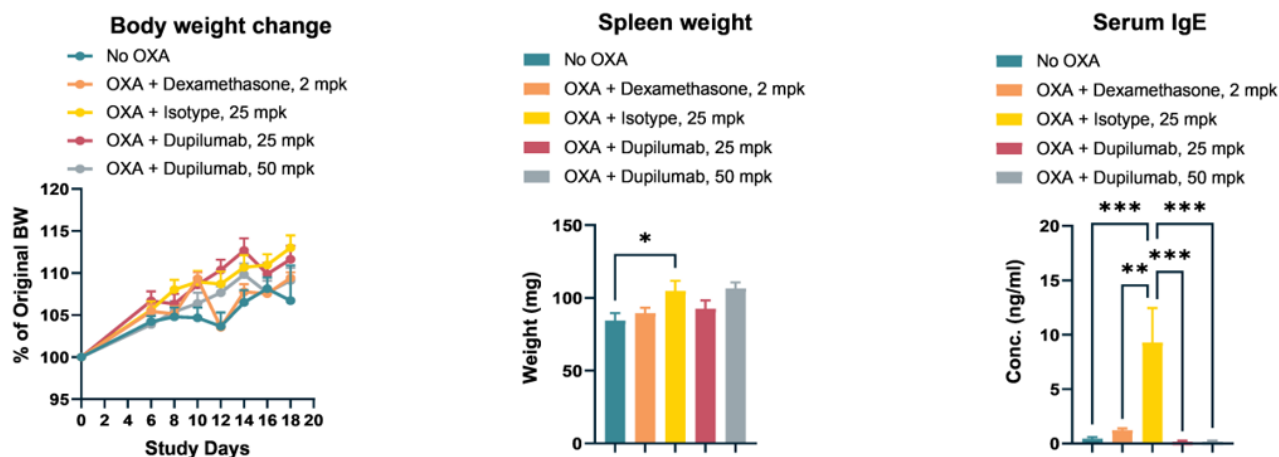


Fig6. Dexamethasone and dupilumab treatments are well tolerated. Both significantly reduced IgE levels in serum but not spleen weight. (In cooperation with CrownBio)

Ordinary one-way ANOVA were applied for analysis compared to Isotype group, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

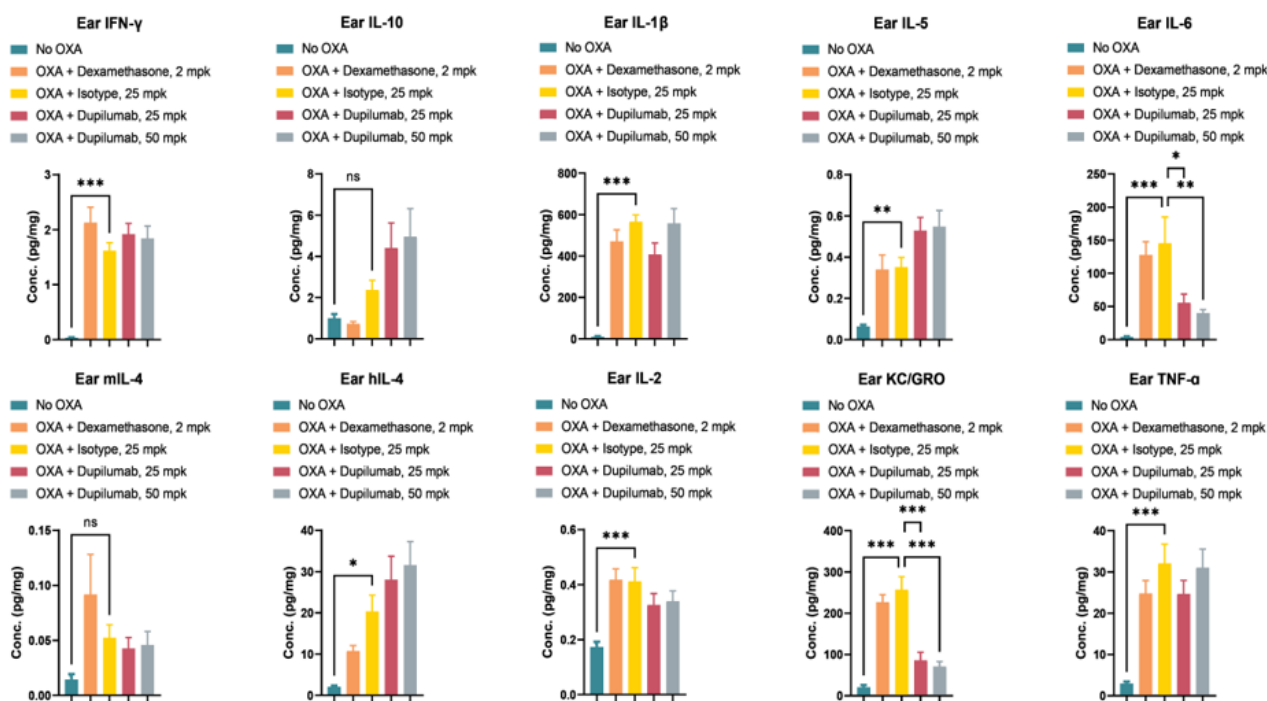


Fig7. Repeated OXA-induced Th2 cytokine production (hIL-4 elevation) and dupilumab treatment significantly reduces IL-6 and KC/GRO levels in lesioned ear. (In cooperation with CrownBio)

Ordinary one-way ANOVA were applied for analysis compared to Isotype group, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

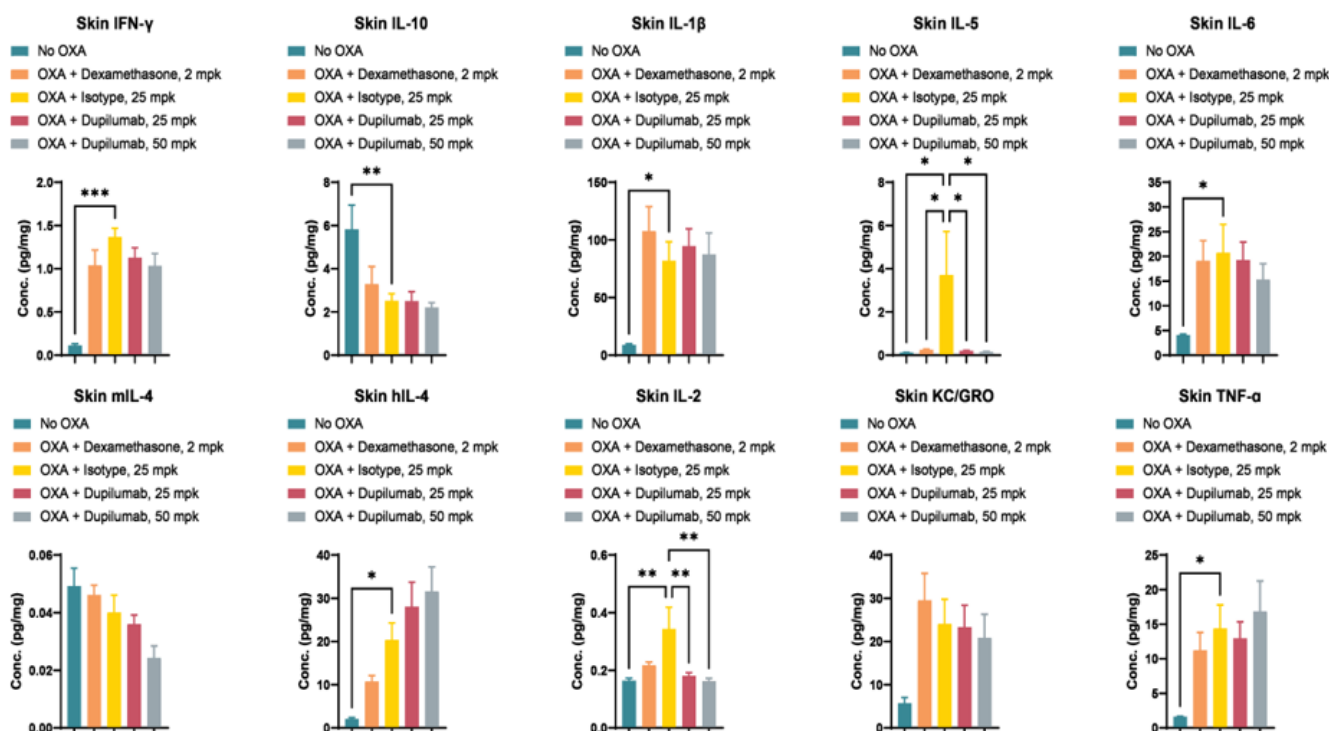


Fig8. Repeated OXA-induced Th2 cytokine production (hIL-4 elevation) and dupilumab treatment significantly reduces IL-5 and IL-2 levels in lesioned skin. (In cooperation with CrownBio)

Ordinary one-way ANOVA were applied for analysis compared to Isotype group, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.