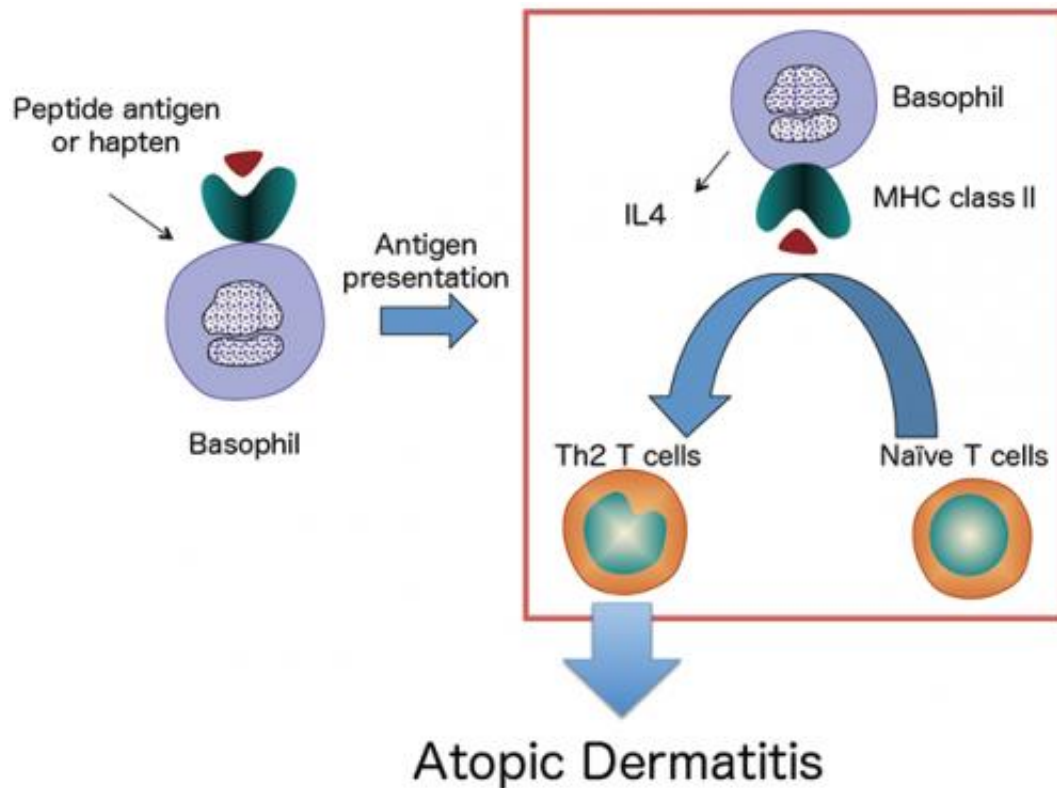


Basophils required for the induction of Th2 immunity to haptens and peptide antigens

May 7 2013



Researchers from Kyoto University have reported that basophils play a central role in Th2 induction.

This study was published in the *Nature Communications* on 23rd April,

2013.

The relative contributions of basophils and [dendritic cells](#) in Th2 skewing to foreign antigen exposure remains unclear. Here we report the ability of basophils to induce Th2 polarization upon epicutaneous sensitization with different antigens using basophil conditionally depleted Bas TRECK [transgenic mice](#).

Basophils are responsible for Th2 skewing to haptens and peptide antigens but not [protein antigens](#) in vivo. Consistently, basophils cannot take up or process OVA protein sufficiently, but present OVA peptide to T cells for Th2 differentiation via MHC class II. Intriguingly, basophils promote Th2 skewing upon OVA protein exposure in the presence of dendritic cells. Taken together, our results suggest that basophils alone are able to induce Th2 skewing with haptens and peptide antigens but require dendritic cells for the induction of Th2 for protein antigens upon epicutaneous immunization.

More information: Atsushi, O. et al. Basophils are required for the induction of Th2 immunity to haptens and peptide antigens, *Nature Communications* 4, Article number: 1738, 2013/04/23/online.
[dx.doi.org/10.1038/ncomms2740](https://doi.org/10.1038/ncomms2740)

Provided by Kyoto University

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