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IgE⁺ memory B cells and plasma cells generated through a germinal-center pathway.

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Abstract

Immunoglobulin E (IgE) antibodies are pathogenic in asthma and allergic diseases, but the in vivo biology of IgE-producing (IgE(+)) cells is poorly understood. A model of the differentiation of IgE(+) B cells proposes that IgE(+) cells develop through a germinal-center IgG1(+) intermediate and that IgE memory resides in the compartment of IgG1(+) memory B cells. Here we have used a reporter mouse expressing green fluorescent protein associated with membrane IgE transcripts (IgE-GFP) to assess in vivo IgE responses. In contrast to the IgG1-centered model of IgE switching and memory, we found that IgE(+) cells developed through a germinal-center IgE(+) intermediate to form IgE(+) memory B cells and plasma cells. Our studies delineate a new model for the in vivo biology of IgE switching and memory.

Comment in

New roots for IgE-producing B cells. [Cell Mol Immunol. 2012]
On the differentiation of mouse IgE⁺ cells. [Nat Immunol. 2012]
IgE class switching and cellular memory. [Nat Immunol. 2012]

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MeSH Terms, Substances

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