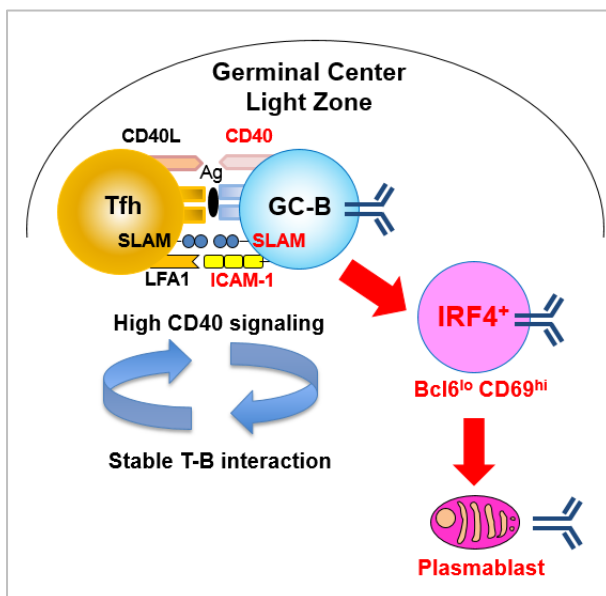


# T follicular helper cell-germinal center B cell interaction strength regulates entry into plasma cell or recycling GC cell fate

Keywords: vaccine, antibody, plasma cell, germinal center

Wataru Ise, Tomohiro Kurosaki and the research group discovered how high affinity antibodies, which are essential for host protection from pathogens, are generated. The findings in this study are expected to contribute to the development of novel vaccine that targets efficient production of antibody against various virus.

Using mouse model, the study clarified the cellular and molecular mechanism by which “high quality” antibodies, which have high affinity against pathogens such as influenza virus, are developed during immune response. Upon invasion of pathogens to our body, B cells are activated and differentiated to plasma cells which produce pathogen-specific antibodies. Importantly, some of activated B cells form germinal centers, microenvironments where B cells with high affinity antibodies are generated. Thus, germinal center B cells are sources of plasma cells producing high affinity antibodies. This study analyzed germinal center B cells carefully and identified plasma cell precursors among germinal center B cells. Furthermore, the study revealed what kind of signals or molecules are involved in the development of such plasma cell precursors in germinal center. Together, the efficient induction of plasma cell precursors in germinal center would be the one of the targets of new vaccine.



## Article Information

**Journal:** Immunity (Online Apr. 18, 2018)

**Title:** T follicular helper cell-germinal center B cell interaction strength regulates entry into plasma cell or recycling GC cell fate

**Authors:** Wataru Ise, Kentaro Fujii, Katsuyuki Shiroguchi, Ayako Ito, Kohei Kometani, Kiyoshi Takeda, Eiryu Kawakami, Kazuo Yamashita, Kazuhiro Suzuki, Takaharu Okada and Tomohiro Kurosaki