

## Supplemental Figures

### ***RAG1* high expression associated with *IKZF1* dysfunction in adult B-cell acute lymphoblastic leukemia**

Qi Han<sup>1,2</sup>, Jinlong Ma<sup>1,2</sup>, Yan Gu<sup>1,2</sup>, Huihui Song<sup>1,2</sup>, Malika Kapadia<sup>3</sup>, Yuka Imamura Kawasawa<sup>2,4</sup>, Sinisa Dovat<sup>2,3</sup>, Chunhua Song<sup>2,3</sup>, Zheng Ge<sup>1,2, §</sup>

<sup>1</sup>Department of Hematology, Zhongda Hospital, Medical School of Southeast University, Institute of Hematology Southeast University, Nanjing 210009, China;

<sup>2</sup>International Cooperative Leukemia Group and International Cooperative Laboratory of Hematology, Zhongda Hospital, Medical School of Southeast University, Nanjing 210009, China;

<sup>3</sup>Department of Pediatrics, Pennsylvania State University Medical College, Hershey, PA17033, USA;

<sup>4</sup>Genome Sciences and Bioinformatics Core Facility, Institute for Personalized Medicine, Penn State College of Medicine, Hershey, PA17033, USA;

**Keywords:** *RAG1*; *IKZF1*; adult; acute lymphoblastic leukemia

**Running title:** Overexpression of *RAG1* in adult ALL

§Correspondence to:

Zheng Ge, M.D., Ph.D.

Zhongda Hospital, Medical School of Southeast University

Department of Hematology

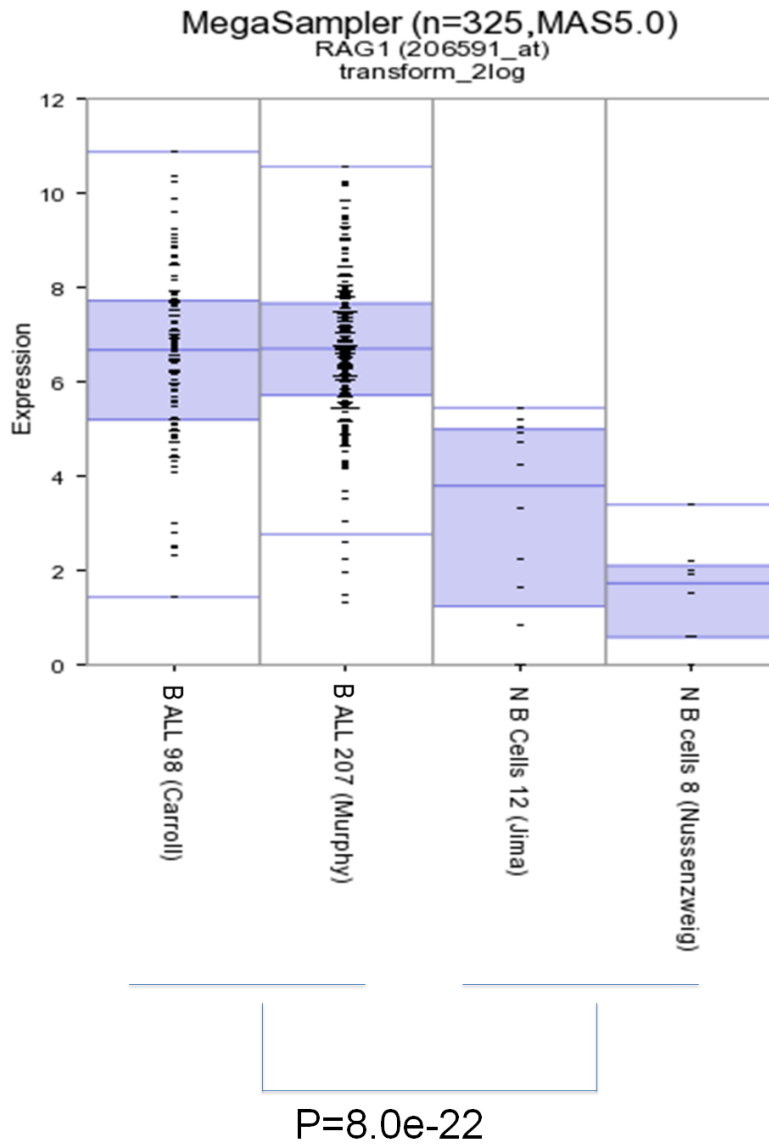
Institute of Hematology Southeast University

Nanjing 210009, China

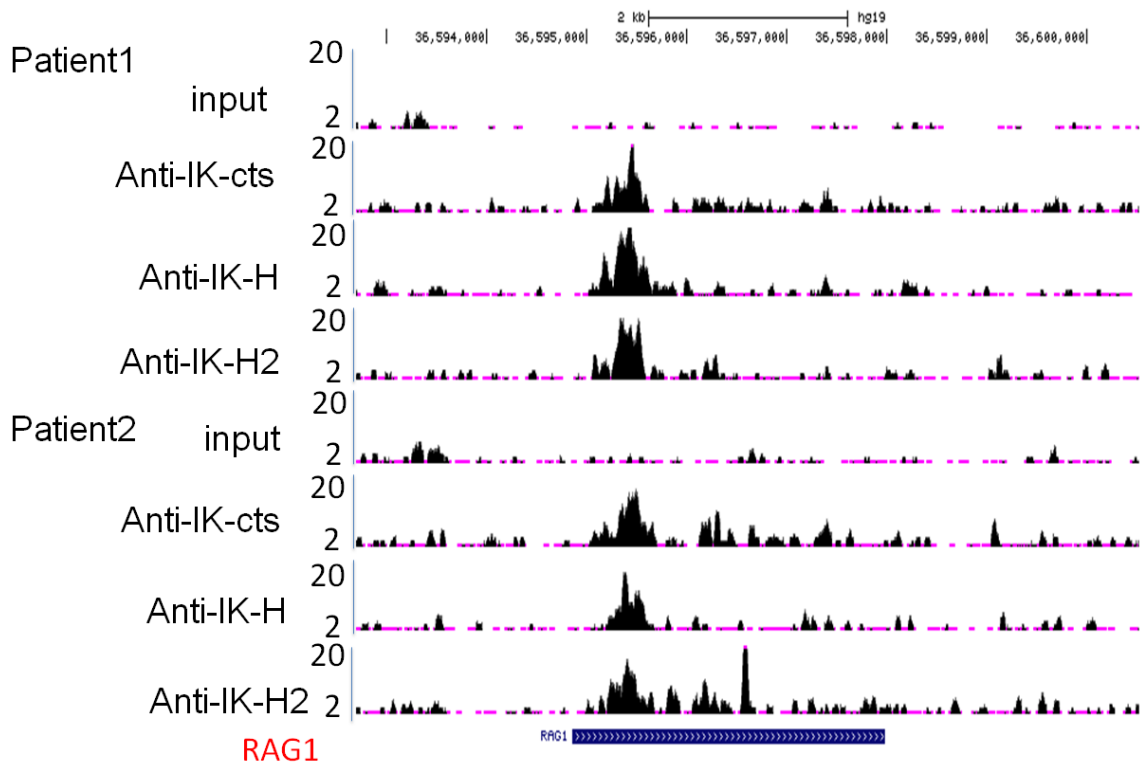
Telephone: 86-25-83262468

FAX: 86-25-83262471

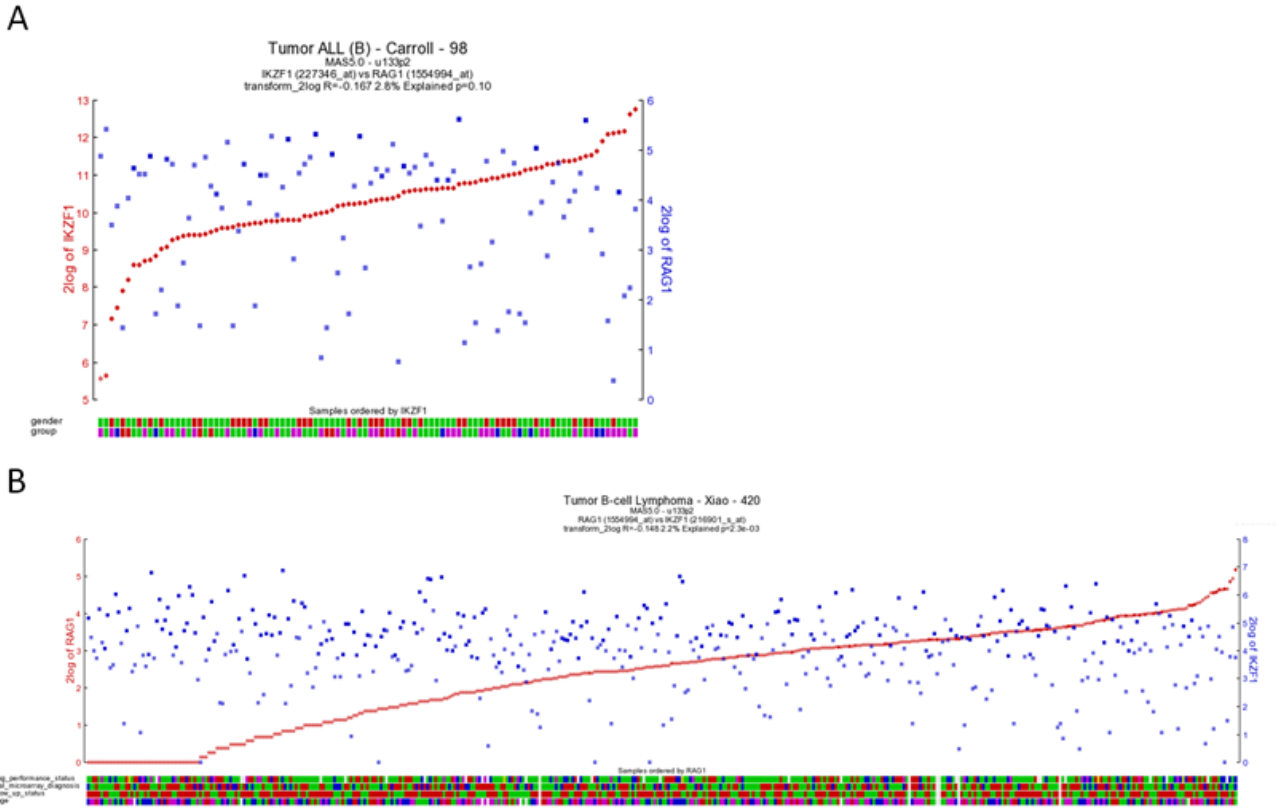
E-mail: [Janege879@hotmail.com](mailto:Janege879@hotmail.com)



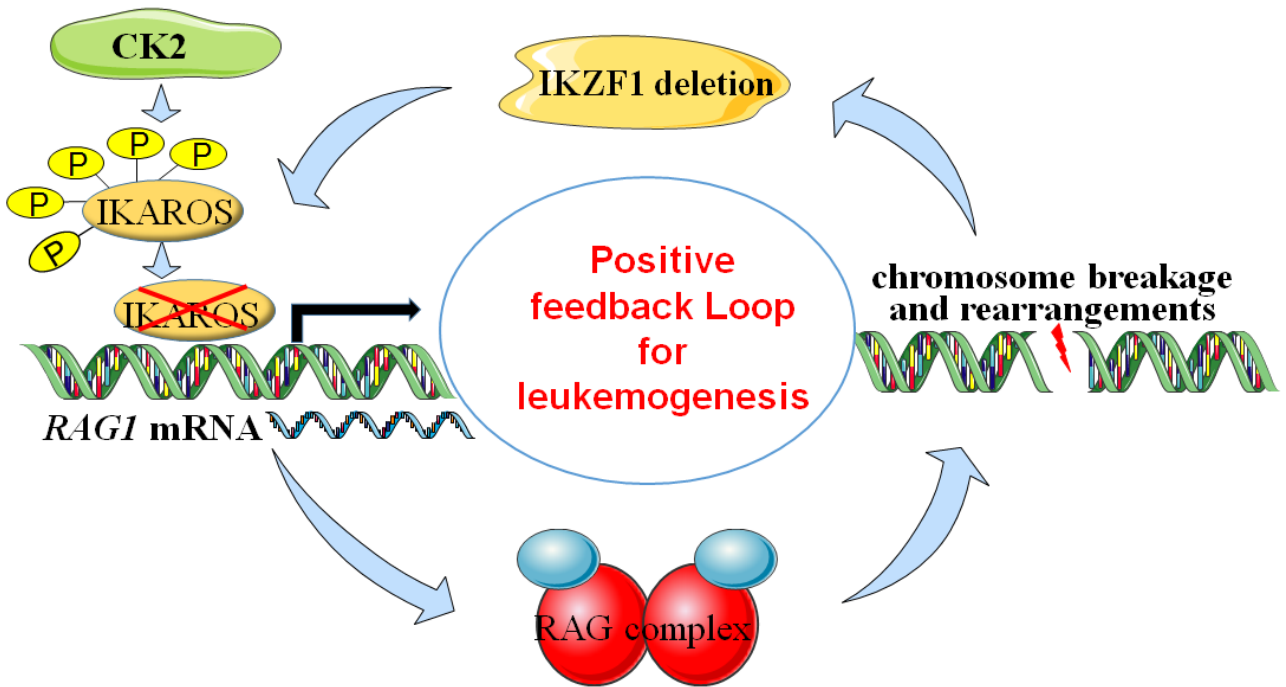
**Supplemental Fig 1** *RAG1* expression in the reported B-ALL microarray cohort studies



**Supplemental Fig2 IKAROS** binds to the promoter of *RAG1* in primary B-ALL identified by ChIP-seq with different anti-Ikaros antibodies in two patients



**Supplemental Fig. 3 Correlation of *RAG1* expression with *IKZF1* in the cohort of B-ALL (A) and B lymphoma patients.** Data generated from human oncogenomics server with GEO database (GSE11877). Pearson correlation is used to calculate the statistics.



Supplemental Fig 4 Proposed model for amplified role of *RAG1* high expression with *IKZF1* deletion in oncogenesis of B-ALL.