Figure S1. ITK-SYK fusion construct was overexpressed in cell lines. (A) Sequence analysis of the PCR product of the ITK-SYK fusion gene. (B) Jurkat cells were transduced with GV287-ITK-SYK at an MOI of 50 for 16 h and supplemented with 10  $\mu$ g/ml polybrene. After 72 h, the ITK-SYK<sup>+</sup> Jurkat cells were evaluated under a fluorescence microscope for the expression of EGFP. Left, bright-field microscopy image; right, fluorescence microscopy image. Scale ba=20  $\mu$ m. (C) After Jurkat cells were transduced with lentiviral vectors for 72 h, 10<sup>5</sup> Jurkat cells were assessed. Infection efficiency was determined by EGFP ratio, detected by flow cytometry. ITK-SYK, IL-2-inducible T-cell kinase-spleen tyrosine kinase; EGFP, enhanced green fluorescence protein.

