GATA3 is a transcription factor that regulates the differentiation of effector T cells, and yet its gene regulation remains unknown. To determine how GATA3 expression is regulated by DNA elements, we characterized GATA3 enhancer hubs in naïve CD4+ T cells by a CRISPR tiling deletion screen. The results uncover a GATA3 primed enhancer that is activated in T helper 2 cells intersects with genetic variants for allergic diseases, indicating dysregulation of GATA3 expression underlies allergic diseases.