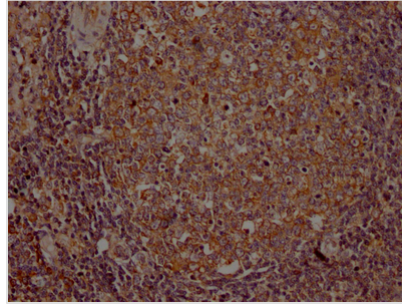




ITK Recombinant Monoclonal Antibody

Product Code	CSB-RA954682A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	Q08881
Immunogen	A synthesized peptide derived from human ITK
Species Reactivity	Human
Tested Applications	ELISA, IHC; Recommended dilution: IHC:1:50-1:200
Relevance	<p>Tyrosine kinase that plays an essential role in regulation of the adaptive immune response. Regulates the development, function and differentiation of conventional T-cells and nonconventional NKT-cells. When antigen presenting cells (APC) activate T-cell receptor (TCR), a series of phosphorylation lead to the recruitment of ITK to the cell membrane, in the vicinity of the stimulated TCR receptor, where it is phosphorylated by LCK. Phosphorylation leads to ITK autophosphorylation and full activation. Once activated, phosphorylates PLCG1, leading to the activation of this lipase and subsequent cleavage of its substrates. In turn, the endoplasmic reticulum releases calcium in the cytoplasm and the nuclear activator of activated T-cells (NFAT) translocates into the nucleus to perform its transcriptional duty. Phosphorylates 2 essential adapter proteins: the linker for activation of T-cells/LAT protein and LCP2. Then, a large number of signaling molecules such as VAV1 are recruited and ultimately lead to lymphokine production, T-cell proliferation and differentiation.</p>
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Signal transduction
Gene Names	ITK
Clone No.	8F10
Image	



IHC image of CSB-RA954682A0HU diluted at 1:100 and staining in paraffin-embedded human lymph node tissue performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4^o overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.

Description

The ITK recombinant monoclonal antibody is a valuable tool for the detection of human ITK protein in ELISA and IHC applications. This antibody is developed using recombinant DNA technology, wherein the gene that codes for the ITK monoclonal antibody is synthesized after sequencing the cDNA of the hybridomas that produce the ITK antibody. These hybridomas are obtained by fusing myeloma cells with B cells isolated from animals that have been immunized with a synthesized peptide derived from human ITK. The synthesized gene is then cloned into a vector. The ITK antibody gene-containing vector is transfected into cells for cultivation. The resulting ITK recombinant monoclonal antibody is purified using affinity chromatography from the cell culture supernatant.

The ITK is a protein that plays an important role in T-cell activation and signaling. When a T-cell receptor (TCR) on the surface of a T-cell recognizes an antigen presented by an antigen-presenting cell (APC), ITK is activated and triggers a signaling cascade that leads to T-cell activation and proliferation. ITK is also involved in signaling downstream of chemokine receptors and integrins, which are important for T-cell migration and adhesion.