

ITK Protein, Mouse, Recombinant (His-GST & Strep-II)

General Information

Synonyms:	Tcsk;IL2-inducible T-cell kinase;Emt;Tsk
Protein Construction:	Arg347-Leu625
Species:	Mouse
Expression Host:	Baculovirus Insect Cells
Accession:	Q03526
Molecular Weight:	61.42 kDa (predicted and reducing conditions)

QC Testing

Biological Activity:	Activity testing is not tested. It is theoretically active, but we cannot guarantee it.
Purity:	> 95% as determined by Bis-Tris PAGE
Endotoxin:	< 1.0 EU/ μ g of the protein as determined by the LAL method.
Formulation:	Supplied as 0.22 μ m filtered solution in 50mM Tris, 100mM NaCl, 10% Glycerol, 0.5mM GSH (pH 7.5).

Preparation and Storage

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

IL-2-inducible T cell kinase is a member of the protein kinase superfamily, Tyr protein kinase family, and TEC subfamily. It contains 1 Btk-type zinc finger, 1 PH domain, 1 protein kinase domain, 1 SH2 domain, and 1 SH3 domain. As an intracellular kinase expressed in T-cells, IL-2-inducible T cell kinase contains both SH2 and SH3 domains which are often found in intracellular kinases. It is thought to play a role in T-cell proliferation and differentiation. It regulates the development, function, and differentiation of conventional T-cells and nonconventional NKT-cells. IL-2-inducible T cell kinase also plays an essential role in the regulation of the adaptive immune response. Effects in IL-2-inducible T cell kinase are the cause of lymphoproliferative syndrome EBV-associated autosomal type 1 (LPSA1). LPSA1 is a rare immunodeficiency characterized by extreme susceptibility to infection with Epstein-Barr virus (EBV). Inadequate immune response to EBV can have a fatal outcome. Clinical features include splenomegaly, lymphadenopathy, anemia, thrombocytopenia, pancytopenia,

recurrent infections. There is an increased risk of lymphoma.

Reference

Lee SH,et al. (2011) The association of a single-nucleotide polymorphism of the IL-2 inducible T-cell Kinase gene with asthma. *Ann Hum Genet.* 75(3):359-69.

Yao HL,et al. (2010) Effect of Itk down regulation on cytokines production in Jurkat cell. *Zhonghua Shi Yan He Lin Chuang Bing Du Xue Za Zhi.* 24(5):358-61.

Pechloff K,et al. (2010) The fusion kinase ITK-SYK mimics a T cell receptor signal and drives oncogenesis in conditional mouse models of peripheral T cell lymphoma. *J Exp Med.* 207(5):1031-44.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481