Data Sheet (Cat.No.TMPY-04407)

TargetMol

LOK Protein, Human, Recombinant (His)

General Information

Synonyms:	serine/threonine kinase 10;PRO2729;LOK
Protein Construction:	A DNA sequence encoding the human STK10 (NP_005981.3) (Arg 18-Glu 317) was expressed, with a polyhistide tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	O94804
Molecular Weight:	36 kDa (predicted); 40 kDa (reducing conditions)

QC Testing

Biological Activity:	The specific activity was determined to be >200 nmol/min/mg using synthetic AXLtide peptide (KKSRGDYMTMQIG) as substrate.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Supplied as sterile 20 mM Tris, 500 mM NaCl, pH 8.0.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store the product under sterile conditions at -20°C to -80°C. Samples are stable for up to 12 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

Proteins are shipped with blue ice.

Protein Background

Serine / threonine-protein kinase 1, also known as Lymphocyte-oriented kinase, STK1 and LOK, belongs to the protein kinase superfamily, STE Ser / Thr protein kinase family and STE2 subfamily. Protein kinases constitute a large superfamily of enzymes with key regulatory functions in nearly all signal transmission processes of eukaryotic cells. The Ste2 family of serine/threonine kinases plays an important role in numerous cellular functions such as growth, apoptosis, and morphogenesis. STK1 is similar to several known polo-like kinase kinases. It can associate with and phosphorylate polo-like kinase 1, and overexpression of a kinase-dead version of the protein interferes with normal cell cycle progression. STK1 can also negatively regulate interleukin 2 expression in T-cells via the mitogen activated protein kinase kinase 1 pathway. Stk1 can associate with Plk1 in cells and furthermore

can phosphorylate Plk1. It can also act on substrates such as myelin basic protein and histone 2A on serine and threonine residues.

Reference

Kuramochi S, et al., 1997, J. Biol. Chem. 272 (36): 22679-84.
Kuramochi S, et al., 1999, Immunogenetics. 49 (5): 369-75.
Walter, SA. et al., J Biol Chem 2003, 278 (20):18221-8.