Recombinant Human DYRK3/REDK Protein (His & GST Tag)

Catalog Number:PKSH030392

Note: Centrifuge before opening to ensure complete recovery of vial contents.

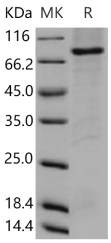
Description

Synonyms	DYRK5;hYAK3-2;RED;REDK
Species	Human
Expression Host	Baculovirus-Insect Cells
Sequence	Met 1-Ser 588
Accession	O43781-1
Calculated Molecular Weight	93.5 kDa
Observed molecular weight	80 kDa
Tag	N-His-GST
Bioactivity	The specific activity was determined to be 22 nmol/min/mg using synthetic DYRKtide peptide (RRRFRPASPLRGPPK) as substrate.

Properties

Purity	> 85 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per μg of the protein as determined by the LAL method.
Storage	Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles.
Shipping	This product is provided as liquid. It is shipped at frozen temperature with blue ice/gel packs. Upon receipt, store it immediately at < - 20°C.
Formulation	Supplied as sterile solution of 20mM Tris, 500mM NaCl, 0.5mM PMSF, 10% glycerol, pH 8.0
Reconstitution	Not Applicable

Data



> 85 % as determined by reducing SDS-PAGE.

Background

Dual specificity tyrosine-phosphorylation-regulated kinase 3, also known as Regulatory erythroid kinase, REDK and DYRK3, is a nucleus protein which belongs to theprotein kinase superfamily, CMGC Ser/Thr protein kinase family and MNB/DYRK subfamily. DYRKs are an emerging family of dual-specificity kinases that play key roles in cell proliferation, survival, and development. DYRK3 contains oneprotein kinase domain. Isoform 1 and isoform 2 of DYRK3 are highly expressed in testis and in hematopoietic tissue such as fetal liver, and bone marrow. Isoform 2 of DYRK3 is the predominant form in testis. Isoform 1 of DYRK3 is the predominant form in fetal liver and bone marrow. Isoform 1 and isoform 2 are present at low levels in heart, pancreas, lymph node, and thymus. DYRK3 is a negative regulator of EPO-dependent erythropoiesis. It may place an upper limit on red cell production during stress erythropoiesis. DYRK3 inhibits cell death due to cytokine withdrawal in hematopoietic progenitor cells. It may also act by regulating CREB/CRE

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signaling. DYRK3 proved to effectively inhibit NFAT (nuclear factor of activated T cells) transcriptional response pathways and to co-immunoprecipitate with NFATc3. DYRK3 attenuates (and possibly apportions) red cell production selectively during anemia.

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