

## DYRK1B Protein, Human (Sf9, GST)

Cat. No.:	HY-P701670
Synonyms:	DYRK1B; Dual specificity tyrosine-phosphorylation-regulated kinase 1B; Minibrain-related kinase; Mirk protein kinase
Species:	Human
Source:	Sf9 insect cells
Accession:	Q9Y463 (A2-S629)
Gene ID:	9149
Molecular Weight:	

### PROPERTIES

Appearance	Solution.
Formulation	Supplied as a 0.22 µm filtered solution of 50 mM Tris-HCl, pH7.5, 200 mM NaCl, 20% glycerol.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	Please use rapid thawing with running water to thaw the protein.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

### DESCRIPTION

Background	DYRK1B, a dual-specificity kinase endowed with both serine/threonine and tyrosine kinase activities, assumes a critical role in cellular processes, particularly in ribosomal DNA (rDNA) double-strand break repair and the maintenance of rDNA copy number. During instances of DNA damage, DYRK1B orchestrates transcription silencing by phosphorylating and promoting the accumulation of double-strand breaks through the histone methyltransferase EHMT2. Beyond its involvement in DNA repair, DYRK1B exhibits versatile functions, enhancing the transcriptional activity of TCF1/HNF1A and FOXO1, inhibiting epithelial cell migration, and promoting survival of colon carcinoma cells in mitogen-poor environments. Moreover, DYRK1B modulates signaling pathways such as SHH and WNT1, thereby facilitating adipogenesis, and concurrently stimulates the expression of the gluconeogenic enzyme glucose-6-phosphatase catalytic subunit 1 (G6PC1). This multifaceted kinase emerges as a key regulator in diverse cellular processes, contributing to both DNA repair mechanisms and the modulation of crucial signaling pathways.
------------	---

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA