

HIPK1 Protein, Human (Sf9)

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| Cat. No.: | HY-P701693 |
| Synonyms: | HIPK1; Homeodomain-interacting protein kinase 1; Nuclear body-associated kinase 2 |
| Species: | Human |
| Source: | Sf9 insect cells |
| Accession: | Q86Z02 (T158-I555) |
| Gene ID: | 204851 |
| Molecular Weight: | |

PROPERTIES

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| 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

HIPK1, a serine/threonine-protein kinase, emerges as a multifaceted regulator involved in transcriptional control and TNF-mediated cellular apoptosis. Functioning as a corepressor for homeodomain transcription factors, HIPK1 plays a pivotal role in modulating gene expression. It phosphorylates key substrates, including DAXX and MYB, exerting regulatory control over their activities. In response to stress, HIPK1 phosphorylates DAXX, facilitating its translocation from the nucleus to the cytoplasm. Moreover, HIPK1 acts as a negative regulator of MYB by inactivating its transcription factor activity through phosphorylation. Notably, HIPK1's intricate involvement in the TNF-mediated pathway prevents MAP3K5-JNK activation in the absence of TNF, promoting apoptosis through derepression. Beyond its role in apoptosis, HIPK1 is implicated in anti-oxidative stress responses and contributes to diverse developmental processes, such as the regulation of eye size, lens formation, retinal lamination, angiogenesis, and erythroid differentiation. Furthermore, its phosphorylation of PAGE4 at 'Thr-51' is crucial for PAGE4's ability to enhance the transcriptional activator activity of JUN. This versatile kinase, HIPK1, emerges as a key player in cellular homeostasis and developmental processes with implications in pathological conditions like malignant squamous cell tumor formation.

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

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