Recombinant E2AK2 protein (His tag)

Catalog Number	546818
Synonyms	Eukaryotic translation initiation factor 2-alpha kinase 2; eIF-2A protein kinase 2; Interferon-inducible RNA-dependent protein kinase; P1/eIF-2A protein kinase; Protein kinase RNA-activated; PKR; Protein kinase R; Tyrosine-protein kinase EIF2AK2; p68 kinase
Species	Human
Expression System	E. coli
Accession	P19525
Molecular Weight	Predictes a molecular mass of 20.25 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 20 kDa band.

Product Information

Sequence Region	2-169
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 2-169 aa (P19525) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human EIF2AK2 (PKR) Fragment (aa 2-169) – a high-purity protein fragment encompassing the double-stranded RNA-binding motifs (DRBM 1 and DRBM 2) of Interferon-induced, double-stranded RNA-activated protein kinase. This fragment is an essential tool for investigating dsRNA binding, innate immune signaling, and kinase regulation in viral infection and cellular stress responses. The full-length Interferon-induced, double-stranded RNA-activated protein kinase (EIF2AK2/PKR) is a key mediator of the innate immune response to viral infection. It functions as a dsRNA-dependent serine/threonine-protein kinase that phosphorylates eukaryotic translation initiation factor 2-alpha (EIF2S1/eIF-2-alpha), leading to global inhibition of protein synthesis and activation of the integrated stress response to suppress viral replication. PKR also regulates multiple signaling pathways including NF-kappa-B and p38 MAPK, influences apoptosis, cell proliferation, and inflammasome activation, and exhibits dual localization in the cytoplasm and nucleus. The provided fragment specifically contains the DRBM 1 and DRBM 2 domains, which are critical for dsRNA recognition and subsequent kinase activation, making it invaluable for structural and functional studies of PKR's RNA-sensing mechanisms.