Recombinant IKKβ protein

Catalog No: 31176
Expressed In: Baculovirus

Quantity: 10 µg
Concentration: 0.695 µg/µl
Source: Human

Buffer Contents: 10 µg of Recombinant IKKβ protein in 50 mM HEPES pH 7.5, 100 mM NaCl, 5 mM DTT, 20% glycerol. Protein is supplied at 0.695 µg/µl.

Background: IKKβ (**IκB Kinase beta** subunit) – The **IκB Kinase (IKK) complex** is the key enzyme involved in the activation and translocation of **NFκB** (NFκB p50 and NFκB p65). The IKK complex is composed of two catalytic subunits (IKKα and **IKKβ**) and a regulatory subunit (IKKγ).

NFκB signaling is negatively regulated by the sequestration of the NFκB complex in the cytoplasm by its association with the IκB family of inhibitory proteins. Upon its activation, the IKK complex phosphorylates IκBα at Ser32 and Ser36. This results ultimately in the degradation of IκB and the activation and nuclear translocation of NFκB.

While both IKK-alpha and IKK-beta subunits are Ser/Thr kinases, IKK beta appears to be the principal kinase, as IKKα is not required for activation of the IKK complex and the subsequent degradation of IκBα. Once activated, IKKβ autophosphorylates, which decreases IKK activity, thereby preventing a prolonged activation of inflammation.

Protein Details: Recombinant human IKKβ protein was produced using baculovirus infected Sf9 cells. The protein was made against amino acids M1-S756, accession number NM_001556 and N-terminally fused to GST-HIS_6-Thrombin cleavage site. Purified by Immobilized Metal Affinity Chromatography.

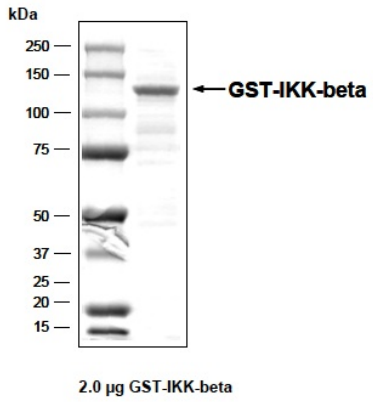
Application Notes: Recombinant IKKβ is suitable for kinase assays and Western blot. The molecular weight of the protein is 120.201 kDa. The activity of the protein is 2 pmol/µg min.

Recommended kinase reaction conditions: 60 mM HEPES-NaOH, pH 7.5, 3 mM $MgCl_2$, 3 mM $MnCl_2$, 3 µM Na-orthovanadate, 1.2 mM DTT, 50 µg/ml $PEG_{20.000}$, ATP (variable), Substrate: IκBα derived peptide (R11-DDRHDSGLDSMKD) at 40 µg/ml, Recombinant IKK&beta at 2 µg/ml.

Kinase activity may vary depending on the substrate and reaction conditions used.

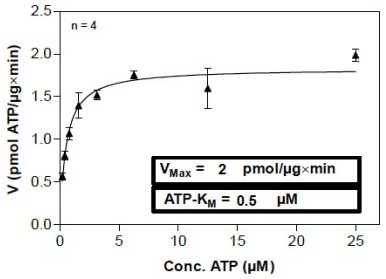
Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is guaranteed for 6 months from date of receipt.

This product is for research use only and is not for use in diagnostic procedures.



Recombinant IKKβ protein Coomassie Stain
Coomassie stained gel of 2 µg of IKKβ protein.

Determination of K_m value for ATP:



IKKβ activity assay.
Recombinant IKKβ activity measured using a kinase assay.