Recombinant TYK2 protein (His tag)

Catalog Number	544540
Species	Human
Expression System	E. coli
Accession	P29597
Molecular Weight	Predictes a molecular mass of 38.73 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 39 kDa band.

Product Information

Sequence Region	1-329
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 1-329 aa (P29597) 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 Non-receptor tyrosine-protein kinase TYK2 (EC 2.7.10.2) Fragment (residues 1-329) is a high-purity, stable protein fragment ideal for structural studies, biochemical assays, and kinase activity research. This 329-amino acid fragment was computationally designed for optimal solubility and stability, enabling reliable investigation of TYK2's catalytic and regulatory roles in cytokine and interferon signaling pathways. TYK2 is a non-receptor tyrosine kinase essential for numerous cytokine and interferon signaling pathways, regulating critical biological processes including cell growth, development, migration, and both innate and adaptive immunity. The full-length protein functions as both a structural and catalytic component in heterodimeric cytokine receptor complexes, where it associates with receptor chains such as IFNAR1, IL12RB1, IL10RB, or IL13RA1. Upon cytokine binding, TYK2 phosphorylates and activates these receptors, creating docking sites for STAT family members (STAT1, STAT3, STAT4, STAT6). Subsequent phosphorylation of STAT proteins by TYK2 (or associated JAK1/JAK2) leads to STAT dimerization, nuclear translocation, and regulation of cytokine-responsive genes. TYK2 also exhibits regulatory functions, including negative regulation of STAT3 activity through phosphorylation at specific tyrosine residues. This kinase plays a pivotal role in multiple interleukin and interferon signaling cascades, making it a significant target for immunological and inflammatory disease research.