Recombinant IBP2 protein (His tag)

Catalog Number	542162
Synonyms	IBP-2; IGF-binding protein 2; IGFBP-2
Species	Human
Expression System	E. coli
Accession	P18065
Molecular Weight	Predictes a molecular mass of 17.80 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 18 kDa band.

Product Information

Sequence Region	186-325
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, 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 186-325 aa (P18065) 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 Insulin-like Growth Factor-Binding Protein 2 (IGFBP-2) Fragment (residues 186-325), encompassing the Thyroglobulin type-1 domain, is a high-purity protein designed for studying domain-specific functions in IGF regulation, cell migration, and apoptosis. Insulin-like Growth Factor-Binding Protein 2 (IGFBP-2) is a multifunctional secreted protein critical for modulating the bioavailability of IGFs (IGF1 and IGF2) to their receptors, thereby regulating cellular processes such as proliferation, differentiation, and apoptosis in a cell-type-specific manner. It coordinates with receptor protein tyrosine phosphatase beta (PTPRB) and the IGF1 receptor to stimulate PTEN phosphorylation, leading to PTEN inactivation and AKT1 activation, enhancing IGF-mediated signaling. Additionally, IGFBP-2 promotes cell migration via interaction with integrin alpha5 (ITGA5) through an RGD motif and enhances endothelial progenitor cell adhesion. Upon mitochondrial damage, it facilitates apoptosis in podocytes through ITGA5 interaction, activating focal adhesion kinase (FAK)-mediated mitochondrial injury pathways. As a secreted protein, IGFBP-2 functions extracellularly, influencing key physiological and pathological mechanisms.