Recombinant HBB protein (His tag)

Catalog Number	542491
Synonyms	Beta-globin; Hemoglobin beta chain
Species	Human
Expression System	E. coli
Accession	P68871
Molecular Weight	Predictes a molecular mass of 17.52 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 18 kDa band.

Product Information

Sequence Region	2-147
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>85%, 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 2-147 aa (P68871) 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 Hemoglobin Subunit Beta (Beta-globin) Fragment (2-147) is a high-purity protein designed for oxygen transport studies and functional domain analysis. This fragment fully encompasses the Globin domain, making it an ideal tool for investigating hemoglobin's role in gas exchange and related physiological processes. Hemoglobin subunit beta is a critical component of hemoglobin, primarily responsible for oxygen transport from the lungs to peripheral tissues. Beyond its canonical role, the full-length protein gives rise to bioactive peptides including LVV-hemorphin-7, which potentiates bradykinin activity to lower blood pressure, and Spinorphin, which functions as an endogenous inhibitor of enkephalin-degrading enzymes and a selective antagonist of the P2RX3 pain receptor. These properties highlight hemoglobin beta's multifaceted involvement in oxygen homeostasis, blood pressure regulation, and pain/inflammation pathways.