Recombinant KAIN protein (His tag)

Catalog Number	537668
Synonyms	Kallikrein inhibitor; Peptidase inhibitor 4; PI-4; Serpin A4
Species	Human
Expression System	E. coli
Accession	P29622
Molecular Weight	Predictes a molecular mass of 45.31 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 45 kDa band.

Product Information

Sequence Region	46-427
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>90%, 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 46-427 aa (P29622) 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 Kallistatin (Serpin A4) Fragment (aa 46-427) is a high-purity protein designed for structural and biochemical studies. This 382-amino acid fragment, derived from the human SERPINA4 gene, retains key functional properties and offers enhanced stability and solubility, making it ideal for investigating kallikrein inhibition mechanisms. Kallistatin, also known as Kallikrein inhibitor or Serpin A4, is a secreted serine protease inhibitor that specifically targets tissue kallikrein. It functions by forming a stable, equimolar complex with the enzyme, effectively inhibiting both amidolytic and kininogenase activities. This inhibition occurs through cleavage at the reactive site, generating a small C-terminal fragment while maintaining complex stability under heat and SDS conditions. As a secreted protein, Kallistatin plays important regulatory roles in protease-mediated pathways and represents a valuable target for studying inflammatory and vascular processes.