Recombinant HPT protein (His tag)

Catalog Number	539652
Synonyms	Zonulin
Species	Human
Expression System	E. coli
Accession	P00738
Molecular Weight	Predictes a molecular mass of 42.21 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 42 kDa band.

Product Information

Sequence Region	46-406
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 46-406 aa (P00738) 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 Haptoglobin (Zonulin) Fragment (aa 46-406) - A precisely engineered protein fragment that fully encompasses the Sushi 2 and Peptidase S1 functional domains, providing researchers with an ideal tool for studying domain-specific functions including hemoglobin binding, antioxidant activity, and intestinal permeability regulation. Haptoglobin is a crucial plasma protein that plays multiple protective roles in human physiology. Its primary function involves capturing free hemoglobin released during hemolysis, forming complexes that prevent kidney damage and enable hepatic recycling of heme iron. Additionally, haptoglobin exhibits significant antioxidant and antibacterial properties, contributing to the acute phase response. The full-length protein exists in two forms: the cleaved version separates into alpha and beta chains, while the uncleaved alpha-2 allele functions as zonulin, regulating intestinal permeability by controlling tight junction disassembly and modulating immune tolerance to non-self antigens. As a secreted protein, haptoglobin performs its diverse functions in the extracellular environment, making this recombinant fragment particularly valuable for studying its domain-specific mechanisms in physiological and pathological contexts.