Recombinant THAP4 protein (His tag)

Catalog Number	543289
Synonyms	Ferric Homo sapiens nitrobindin; Hs-Nb(III); THAP domain-containing protein 4
Species	Human
Expression System	E. coli
Accession	Q8WY91
Molecular Weight	Predictes a molecular mass of 28.87 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 29 kDa band.

Product Information

Sequence Region	339-577
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 339-577 aa (Q8WY91) 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	This product is a recombinant fragment of human Peroxynitrite isomerase THAP4 (Hs-Nb(III)), covering residues 339-577. It is designed as a stable, soluble unit for studying the protein's role in peroxynitrite detoxification and protection against reactive nitrogen and oxygen species, making it ideal for structural and biochemical research applications. The full-length THAP4 protein, encoded by the THAP4 gene in Homo sapiens, functions as a heme-binding peroxynitrite isomerase that converts peroxynitrite to nitrate. This activity enables it to scavenge peroxynitrite and shield free L-tyrosine from peroxynitrite-mediated nitration, highlighting its role in sensing peroxynitrite and detoxifying reactive nitrogen and oxygen species (RNS and ROS). Although it can bind nitric oxide in vitro, it is proposed to modulate transcriptional activity in vivo by responding to peroxynitrite levels. The protein localizes primarily in the cytoplasm and partially in the nucleus, supporting its involvement in cellular defense mechanisms against oxidative and nitrosative stress.