Recombinant HMOX2 protein (His tag)

Catalog Number	546909
Synonyms	HO-2
Species	Human
Expression System	E. coli
Accession	P30519
Molecular Weight	Predictes a molecular mass of 29.99 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 33 kDa band.

Product Information

Sequence Region	2-246
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 2-246 aa (P30519) 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 Heme Oxygenase 2 (HO-2) Fragment (residues 2-246) is a high-quality, soluble protein preparation ideal for structural and functional studies. This 245-amino acid fragment represents a stable, soluble unit of the full-length HO-2 enzyme, which catalyzes the oxidative cleavage of heme to generate biliverdin IXalpha, carbon monoxide, and ferrous iron. The fragment's computational design ensures optimal stability and solubility for biochemical and structural applications. Heme oxygenase 2 (HO-2) is a membrane-bound enzyme that catalyzes the oxidative cleavage of heme at the alpha-methene bridge carbon, releasing carbon monoxide (CO) and generating biliverdin IXalpha while liberating ferrous iron. This enzymatic reaction plays crucial roles in cellular processes including iron recycling and production of signaling molecules. The full-length protein is localized to microsome and endoplasmic reticulum membranes as a single-pass type IV membrane protein with cytoplasmic orientation. The soluble fragment (residues 2-246) maintains the catalytic function of the full-length enzyme while providing enhanced experimental utility due to its improved solubility characteristics.