Recombinant GLRX2 protein (His tag)

Catalog Number	548352
Species	Human
Expression System	E. coli
Accession	Q9NS18
Molecular Weight	Predictes a molecular mass of 14.49 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 14 kDa band.

Product Information

Sequence Region	53-164
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, 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 53-164 aa (Q9NS18) 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 Glutaredoxin-2 (GLRX2) Fragment (aa 53-164) is a high-purity protein encompassing the complete glutaredoxin functional domain. This fragment serves as an essential tool for investigating mitochondrial redox regulation, oxidative stress response, and apoptosis mechanisms in a domain-specific context. Glutaredoxin-2 is a mitochondrial glutathione-dependent oxidoreductase critical for maintaining redox homeostasis during oxidative stress-induced apoptosis. It functions as an efficient catalyst for both monothiol and dithiol reactions, receiving electrons from glutathione and thioredoxin reductase. The protein regulates superoxide production through glutathionylation and deglutathionylation of mitochondrial complex I, with overexpression shown to decrease apoptosis susceptibility by preventing cardiolipin loss and cytochrome c release. While isoform 1 localizes to mitochondria, isoform 2 is nuclear, highlighting its diverse cellular roles in oxidative stress response.