Recombinant PRDX6 protein (His tag)

Catalog Number	546901
Synonyms	1-Cys peroxiredoxin; 1-Cys PRX; 24 kDa protein; Acidic calcium-independent phospholipase A2; aiPLA2; Antioxidant protein 2; Glutathione-dependent peroxiredoxin; Liver 2D page spot 40; Lysophosphatidylcholine acyltransferase 5; LPC acyltransferase 5; LPCAT-5; Lyso-PC acyltransferase 5; Non-selenium glutathione peroxidase; NSGPx; Red blood cells page spot 12
Species	Human
Expression System	E. coli
Accession	P30041
Molecular Weight	Predictes a molecular mass of 26.56 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 28 kDa band.

Product Information

Sequence Region	2-224
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 2-224 aa (P30041) 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	Introducing recombinant Peroxiredoxin-6 (PRDX6) fragment (amino acids 2-224), a versatile human protein engineered to encompass the full Thioredoxin domain. This high-purity fragment is an essential tool for investigating redox regulation, phospholipid metabolism, and cellular protection mechanisms in oxidative stress research. Peroxiredoxin-6 is a multifunctional human enzyme with thiol-specific peroxidase activity, catalyzing the reduction of hydrogen peroxide and diverse organic hydroperoxides to maintain cellular redox balance. Uniquely, it also exhibits calcium-independent phospholipase A2 activity and lysophosphatidylcholine acyltransferase function, enabling dual roles in detoxifying phospholipid hydroperoxides and remodeling phospholipid membranes. Located primarily in the cytoplasm and lysosomes, PRDX6 provides crucial protection against oxidative damage while regulating phospholipid homeostasis. The protein's ability to interact with both oxidized phospholipids at physiological pH and regular phospholipids under acidic conditions underscores its importance in cellular defense and lipid metabolism pathways.