Recombinant SODE protein (His tag)

Catalog Number	530973
Species	Caenorhabditis elegans
Expression System	E. coli
Accession	P34461
Gene ID	176336
Molecular Weight	Predictes a molecular mass of 18.08 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 18 kDa band.

Product Information

Sequence Region	20-178
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 20-178 aa (P34461) 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 Extracellular Superoxide Dismutase [Cu-Zn] (EC-SOD) fragment from Caenorhabditis elegans, encompassing residues 20-178. This 159-amino acid fragment has been computationally optimized for stability and solubility, making it ideal for structural studies and biochemical assays investigating oxidative stress mechanisms. Extracellular Superoxide Dismutase [Cu-Zn] (EC-SOD), encoded by the sod-4 gene in C. elegans, plays a critical role in cellular protection against oxidative stress by catalyzing the conversion of superoxide radicals to hydrogen peroxide. This enzymatic activity is essential for mitigating oxidative damage, which has been implicated in various biological dysfunctions and senescence processes. The full-length protein exists in multiple isoforms: isoform 1 is secreted into the extracellular space, while isoform 2 functions as a peripheral membrane protein. This recombinant fragment represents a stable, soluble unit that maintains key structural features for research applications.