Recombinant SUMF1 protein (His tag)

Catalog Number	540773
Synonyms	FGE; C-alpha-formylglycine-generating enzyme 1; Sulfatase-modifying factor 1
Species	Human
Expression System	E. coli
Accession	Q8NBK3
Molecular Weight	Predictes a molecular mass of 34.09 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 34 kDa band.

Product Information

Sequence Region	86-374
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, 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 86-374 aa (Q8NBK3) 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 Formylglycine-generating enzyme (FGE) fragment (residues 86-374) from Homo sapiens, a key oxidase enzyme essential for sulfatase activation through cysteine-to-formylglycine conversion. This 289-amino acid fragment represents a stable, soluble unit optimized for structural and biochemical studies. Formylglycine-generating enzyme (FGE) is a critical oxidase that catalyzes the conversion of cysteine to 3-oxoalanine (formylglycine) on target proteins using molecular oxygen. This post-translational modification is essential for the maturation of arylsulfatases and certain alkaline phosphatases, which utilize the hydrated form of 3-oxoalanine as a catalytic nucleophile. FGE modifies several important sulfatases including GALNS, ARSA, STS, and ARSE, playing a fundamental role in sulfatase function. The enzyme is localized to the endoplasmic reticulum lumen, where it performs its modification activities on nascent sulfatase proteins. This modification enables sulfatases to hydrolyze sulfate esters, making FGE indispensable for proper sulfatase-mediated metabolic processes.