Recombinant NMRL1 protein (His tag)

Catalog Number	543658
Species	Human
Expression System	E. coli
Accession	Q9HBL8
Molecular Weight	Predictes a molecular mass of 35.00 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 36 kDa band.

Product Information

Sequence Region	1-299
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, 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 1-299 aa (Q9HBL8) 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 NmrA-like family domain-containing protein 1 (NMRAL1), encompassing amino acids 1-299, is a high-purity fragment designed for redox-sensing studies. This stable, soluble construct enables detailed investigation of NMRAL1's role in nitric oxide regulation and apoptosis pathways, making it ideal for biochemical and structural research. NMRAL1 is a redox sensor protein that dynamically responds to intracellular NADPH/NADP(+) levels, undergoing structural and subcellular redistribution. Under low NADPH conditions, it exists as a monomer and binds argininosuccinate synthase (ASS1), inhibiting nitric oxide production and preventing apoptosis. At normal NADPH concentrations, NMRAL1 forms a stable homodimer with NADPH, concealing the ASS1 binding site. It localizes primarily to the cytoplasm and perinuclear region under standard redox conditions, with nuclear translocation promoted by elevated nitric oxide and reduced NADPH/NADP(+) ratios. This protein plays a critical role in linking cellular redox state to apoptotic signaling.