Recombinant RIOX1 protein (His tag)

Catalog Number	548255
Synonyms	60S ribosomal protein L8 histidine hydroxylase; Bifunctional lysine-specific demethylase and histidyl-hydroxylase NO66; Myc-associated protein with JmjC domain; Nucleolar protein 66; hsNO66; Ribosomal oxygenase NO66; ROX
Species	Human
Expression System	E. coli
Accession	Q9H6W3
Molecular Weight	Predictes a molecular mass of 54.18 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 56 kDa band.

Product Information

Sequence Region	181-641
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 181-641 aa (Q9H6W3) 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 Ribosomal Oxygenase 1 (NO66) Fragment (aa 181-641) – a high-purity, functional protein fragment encompassing the essential JmjC domain, ideal for investigating histone demethylation, ribosomal hydroxylation, and epigenetic regulation in human cellular systems. Ribosomal oxygenase 1 (NO66) is a bifunctional human enzyme with dual catalytic activities as a lysine-specific histone demethylase and a ribosomal histidine hydroxylase. It specifically demethylates histone H3 at Lys-4 (H3K4me) and Lys-36 (H3K36me) residues, playing a critical role in epigenetic regulation and histone code modification. The protein also hydroxylates 60S ribosomal protein L8 at His-216, contributing to ribosome biogenesis. NO66 participates in MYC-induced transcriptional activation and regulates osteoblast differentiation through interaction with SP7/OSX. Additionally, it demethylates non-histone substrates like CGAS, modulating DNA sensing pathways. Located primarily in the nucleolus and nucleoplasm, NO66 exhibits distinct subcellular localization in granular nucleolar regions and nucleoplasmic foci, reflecting its diverse nuclear functions in gene expression and ribosomal processing.