Recombinant MSL1 protein (His tag)

Catalog Number	542880
Synonyms	MSL-1; Male-specific lethal 1-like 1; MSL1-like 1; Male-specific lethal-1 homolog 1
Species	Human
Expression System	E. coli
Accession	Q68DK7
Molecular Weight	Predictes a molecular mass of 18.58 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 20 kDa band.

Product Information

Sequence Region	474-614
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, 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 474-614 aa (Q68DK7) 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 MSL1 Protein Fragment (aa 474-614) is a highly stable and soluble fragment of the Male-specific lethal 1 homolog (MSL-1), designed for structural and biochemical studies. This fragment enables researchers to investigate the scaffold function of MSL1 within the MSL histone acetyltransferase complex, facilitating research into epigenetic regulation and chromatin dynamics. The full-length MSL1 protein is a non-catalytic component of the MSL histone acetyltransferase complex, which mediates histone H4 acetylation at Lys-16 (H4K16ac), an epigenetic mark critical for preventing chromatin compaction and maintaining chromosome stability and genome integrity. This complex also plays roles in gene dosage compensation by up-regulating X chromosome genes and promoting Tsix non-coding RNA expression. Within the complex, MSL1 acts as a scaffold to tether MSL3 and KAT8, regulating enzymatic activity, and enhances MSL2 E3 ubiquitin ligase activity to promote histone H2B monoubiquitination at Lys-34, leading to gene activation. MSL1 is localized in the nucleus, specifically in the nucleoplasm and nuclear speckles, underscoring its involvement in nuclear epigenetic processes.