Recombinant UST protein (His tag)

Catalog Number	532813
Synonyms	UST; Heparan sulfate 2-O-sulfotransferase pipe; Protein pipe
Species	Drosophila melanogaster
Expression System	E. coli
Accession	Q86BJ3
Gene ID	40104
Molecular Weight	Predictes a molecular mass of 38.92 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 39 kDa band.

Product Information

Sequence Region	200-514
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>85%, 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 200-514 aa (Q86BJ3) 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	This recombinant protein product features a stable and soluble fragment (residues 200-514) of Drosophila melanogaster Uronyl 2-sulfotransferase homolog pip (UST), a heparan sulfate 2-O-sulfotransferase critical for embryonic dorsoventral axis patterning. The fragment has been computationally optimized for structural and biochemical studies, providing researchers with a functional unit for investigating sulfotransferase mechanisms. The full-length Uronyl 2-sulfotransferase homolog pip (UST) is a Golgi apparatus membrane-anchored sulfotransferase essential for dorsoventral axis establishment in Drosophila embryos. It functions by mediating sulfation of vitelline membrane components, enabling spatially restricted activation of the protease cascade that ultimately leads to localized Toll receptor ligand activation. This enzyme plays a crucial role in embryonic patterning through its modification of glycoproteins or glycosaminoglycans stably deposited in the vitelline membrane. Different isoforms demonstrate varying substrate specificities, with isoform A sulfating multiple eggshell components including Vml, Vm26Aa, Vm32E and psd/palisade/Fcp26Aa, while other isoforms show distinct enzymatic profiles. The protein's localization and function are dependent on proper Golgi targeting mediated by Wbl/windbeutel.