Document Version: V2.0

Recombinant Mouse EXTL3 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51989

Size: 10ug, 100ug

Protein Name: Exostosin-like 3 (EC 2.4.1.223) (Glucuronyl-galactosyl-proteoglycan 4-alpha-N-acetylglucosaminyltransferase) (Multiple exostosis-like protein 3)

Synonym: Extl3

UniProt ID: Q9WVL6

UniProt Link: www.uniprot.org/uniprotkb/Q9WVL6/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 918 AA

Molecular Weight: 104 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MTGYTMLRNGGVGNGGQTCMLRWSNRIRLTWLSFTLFIILVFFPLIAHYYLTTLDEADEAGKRIFGPR
AGSELCEVKHVLDLCRIRESVSEELLQLEAKRQELNSEIAKLNLKIEACKKSIENAKQDLLQLKNVISQT
EHSYKELMAQNQPKLSLPIRLLPEKDDAGLPPPKVTRGCRLHNCFDYSRCPLTSGFPVYVYDSDQF
AFGSYLDPLVKQAFQATVRANVYVTENAAIACLYVVLVGEMQEPTVLRPADLEKQLFSLPHWRTDG
HNHVIINLSRKSDTQNLLYNVSTGRHVAQSTFYAAQYRAGFDLVVSPLVHAMSEPNFMEIPPQVPVK
RKYLFTFQGEKIESLRSSLQEARSFEEEMEGDPPADYDDRIIATLKAVQDSKLDQVLVEFTCKNQPKP
SLPTEWALCGEREDRLELLKLSTFALIITPGDPHLLISSGCATRLFEALEVGAVPVVLGEQVQLPYHD
MLQWNEAALVVPKPRVTEVHFLLRSLSDSDLLAMRRQGRFLWETYFSTADSIFNTVLAMIRTRIQIPA
APIREEVAAEIPHRSGKAAGTDPNMADNGDLDLGPVETEPPYASPKYLRNFTLTVTDCYRGWNSAP
GPFHLFPHTPFDPVLPSEAKFLGSGTGFRPIGGGAGGSGKEFQAALGGNVQREQFTVVMLTYEREE
VLMNSLERLNGLPYLNKVVVVWNSPKLPSEDLLWPDIGVPIMVVRTEKNSLNNRFLPWNEIETEAILSI
DDDAHLRHDEIMFGFRVWREARDRIVGFPGRYHAWDIPHQSWLYNSNYSCELSMVLTGAAFFHKY
YAYLYSYVMPQAIRDMVDEYINCEDIAMNFLVSHITRKPPIKVTSRWTFRCPGCPQALSHDDSHFHE
RHKCINFFVKVYGYMPLLYTQFRVDSVLFKTRLPHDKTKCFKFI

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at-20 ℃ or -80 ℃. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Exostosin-like 3 (EC 2.4.1.223) (Glucuronyl-galactosyl-proteoglycan 4-alpha-N-acetylglucosaminyltransferase) (Multiple exostosis-like protein 3) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Glycosyltransferase which regulates the biosynthesis of heparan sulfate (HS) (PubMed:19336225). Initiates HS synthesis by transferring the first N-acetyl-alpha-D-glucosamine (alpha-GlcNAc) residue (GlcNAcT-I activity) to the tetrasaccharide linker (GlcA-Gal-Gal-Xyl-)Ser core linker. May also transfer alpha-GlcNAc residues during HS elongation (GlcNAcT-II activity). Lacks glucuronyl transferase II (GlcAT-II) activity. Important for both skeletal development and hematopoiesis, through the formation of HS proteoglycans (HSPGs) (By similarity). Through the synthesis of HS, regulates postnatal pancreatic islet maturation and insulin secretion (PubMed:19336225).; Receptor for REG3A, REG3B and REG3G, induces the activation of downstream signaling pathways such as PI3K-AKT or RAS-RAF-MEK-ERK signaling pathway (PubMed:28811323, PubMed:35263589, PubMed:36240758). Required for the function of REG3A in regulating keratinocyte proliferation and differentiation (By similarity). Required for the inhibition of skin inflammation mediated by REG3A through the activation of PI3K-AKT-STAT3 pathway (By similarity). Required for the function of REG3A and REG3G in glucose tolerance in pancreas (PubMed:36240758). Expressed in microglia, is activated by nociceptor-derived REG3G in response to endotoxins, leading to the inhibition of kynurenine pathway to prevent endotoxic death (PubMed:35263589).

Subcellular Localization: Endoplasmic reticulum membrane ; Single-pass type II membrane protein . Golgi apparatus . Cell membrane . Nucleus . Note=Interaction with REG3A induces its translocation to the nucleus.

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.