# Recombinant PLXB3 protein (His tag)

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| **Catalog Number** | 539211 |
| **Species** | Human |
| **Expression System** | E. coli |
| **Accession** | Q9ULL4 |
| **Molecular Weight** | Predictes a molecular mass of 20.06 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 20 kDa band. |

## Product Information

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| **Sequence Region** | 1084-1255 |
| **Form** | Lyophilized powder |
| **Formulation** | Lyophilized from sterile PBS, pH 7.4 |
| **Purity** | >88%, 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 1084-1255 aa (Q9ULL4) were fused with 6His tag. |

## Storage & Handling

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| **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.<br>Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise. |

## Description

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| **Description** | Recombinant Human Plexin-B3 Fragment (aa 1084-1255) - a high-purity protein fragment encompassing the IPT/TIG 4 domain, designed for functional studies of axon guidance, cell migration, and neurite outgrowth mechanisms.<br>Plexin-B3 (PLXNB3) is a human transmembrane receptor for SEMA5A that plays crucial roles in axon guidance, invasive growth, and cell migration. It stimulates neurite outgrowth and mediates $Ca^{2+}$/$Mg^{2+}$-dependent cell aggregation. In glioma cells, SEMA5A stimulation of PLXNB3 leads to F-actin stress fiber disassembly, focal adhesion disruption, cellular collapse, and inhibition of cell migration and invasion through ARHGDIA-mediated RAC1 inactivation. The protein is localized to the cell membrane as a single-pass type I membrane protein and colocalizes with RIT2/RIN at the plasma membrane, highlighting its importance in cellular signaling and structural organization. |