Recombinant VGF protein (His tag)

Catalog Number	546450
Synonyms	NERP-1; NERP-2
Species	Human
Expression System	E. coli
Accession	O15240
Molecular Weight	Predictes a molecular mass of 13.93 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 18 kDa band.

Product Information

Sequence Region	292-403
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 292-403 aa (O15240) 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 product is a recombinant fragment (residues 292-403) of the human Neurosecretory protein VGF, a multifunctional polyprotein involved in neurogenesis, synaptic plasticity, and energy homeostasis. The fragment is designed for structural and biochemical studies, offering a stable and soluble unit ideal for investigating VGF's complex roles in neurological and metabolic processes. The full-length Neurosecretory protein VGF is a secreted polyprotein that undergoes cell-type-specific proteolytic processing to generate multiple bioactive peptides, including Neuroendocrine Regulatory Peptides (NERP-1 and NERP-2), TLQP-21, TLQP-62, and an antimicrobial peptide. These peptides play critical roles in neuroplasticity, memory formation, depression-related behaviors, body fluid homeostasis, energy expenditure, pain response, and antimicrobial defense. VGF is stored in secretory vesicles and secreted, with its derived peptides influencing pathways such as vasopressin release, orexin neuron activation, and receptor signaling (e.g., C3AR1, NTRK2/TRKB). Its significance spans neurogenesis, chronic pain, and metabolic regulation, making it a key target for neuroscience and endocrine research.