Recombinant SEPT2 protein (His tag)

Catalog Number	540322
Synonyms	Neural precursor cell expressed developmentally down-regulated protein 5; NEDD-5
Species	Human
Expression System	E. coli
Accession	Q15019
Molecular Weight	Predictes a molecular mass of 39.42 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 44 kDa band.

Product Information

Sequence Region	34-361
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, 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 34-361 aa (Q15019) 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 Septin-2 (NEDD-5) Fragment (aa 34-361) - A high-quality protein tool designed for studying cytoskeletal dynamics, cell division, and cilia function. This fragment fully encompasses the critical Septin-type G domain, making it ideal for investigating the specific functional roles of this essential GTPase in cellular processes. Septin-2 is a filament-forming cytoskeletal GTPase that plays crucial roles in multiple cellular processes. It forms filamentous structures with other septins at the sperm annulus, maintaining structural integrity and motility of the sperm tail during differentiation. The protein is essential for normal organization of the actin cytoskeleton and contributes to epithelial cell polarization by maintaining polyglutamylated microtubules, facilitating efficient vesicle transport. During mitosis, Septin-2 forms a scaffold at the midplane of the mitotic spindle that maintains CENPE localization at kinetochores, enabling proper chromosome congression and segregation. Additionally, it supports ciliogenesis by maintaining the integrity of the diffusion barrier at the base of primary cilia and has been implicated in the internalization of intracellular pathogens. Septin-2 localizes to various cellular compartments including the cytoplasm, cytoskeleton, mitotic spindle, kinetochores, cleavage furrow, midbody, cell cortex, and cilia membranes, reflecting its diverse functional roles in cellular architecture and division.