Recombinant ACH8 protein (His tag)

Catalog Number	531789
Synonyms	Abnormal pharyngeal pumping eat-2
Species	Caenorhabditis elegans
Expression System	E. coli
Accession	Q9U298
Gene ID	175072
Molecular Weight	Predictes a molecular mass of 27.14 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 28 kDa band.

Product Information

Sequence Region	22-237
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 22-237 aa (Q9U298) 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 represents a stable, soluble fragment (residues 22-237) of the Neuronal Acetylcholine Receptor Subunit eat-2 from Caenorhabditis elegans. This fragment has been computationally optimized for structural and biochemical studies, providing researchers with a reliable tool to investigate the function of this important nicotinic acetylcholine receptor subunit involved in pharyngeal pumping and lifespan regulation. The full-length Neuronal Acetylcholine Receptor Subunit eat-2 functions as a nicotinic acetylcholine receptor that undergoes extensive conformational changes upon acetylcholine binding, leading to the opening of an ion-conducting channel across the plasma membrane. This receptor is specifically expressed in the MC pharyngeal motor neuron where it regulates pharyngeal pumping activity. Beyond its neural function, eat-2 plays significant roles in lifespan determination through mechanisms potentially related to caloric restriction, independent of metabolic activity. Additionally, this subunit contributes to defense against the accumulation of ingested live pathogenic bacteria in the intestine. The protein is localized to the postsynaptic cell membrane and functions as a multi-pass membrane protein within the MC motor neuron, making it a crucial component of neuronal signaling and organismal physiology in C. elegans.