Recombinant ECT2 protein (His tag)

Catalog Number	545966
Synonyms	Epithelial cell-transforming sequence 2 oncogene
Species	Human
Expression System	E. coli
Accession	Q9H8V3
Molecular Weight	Predictes a molecular mass of 42.60 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 45 kDa band.

Product Information

Sequence Region	452-809
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, 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 452-809 aa (Q9H8V3) 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 ECT2 (Epithelial cell-transforming sequence 2 oncogene) Fragment (aa 452-809) is a high-purity protein encompassing the DH and PH domains. This fragment serves as an essential tool for studying guanine nucleotide exchange factor (GEF) activity, Rho GTPase regulation, and mechanisms of cytokinesis and cell polarity in research applications. Full-length ECT2 is a guanine nucleotide exchange factor (GEF) that catalyzes GDP/GTP exchange on Rho family GTPases, including RHOA, RHOC, RAC1, and CDC42. It plays a critical role in cytokinesis by promoting myosin contractile ring formation as part of the centralspindlin complex and regulates mitotic spindle assembly through CDC42 activation. ECT2 is also involved in epithelial cell polarity and tight junction formation via the PARD3-PARD6-PRKCQ complex, neurite outgrowth, and tumor cell proliferation and invasion in cancer contexts. The protein localizes to the nucleus during interphase and redistributes to the cytoplasm, mitotic spindle, cleavage furrow, midbody, and tight junctions during cell division, with its localization influenced by calcium and cell cycle stages.