Recombinant RAD protein (His tag)

Catalog Number	542423
Synonyms	RAD1; Ras associated with diabetes
Species	Human
Expression System	E. coli
Accession	P55042
Molecular Weight	Predictes a molecular mass of 25.89 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 26 kDa band.

Product Information

Sequence Region	90-308
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 90-308 aa (P55042) 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	Introducing the recombinant human GTP-binding protein RAD (RAD1) fragment (amino acids 90-308), a highly stable and soluble protein unit ideal for investigating calcium channel regulation and cardiac function mechanisms. This 219-amino acid fragment enables reliable structural and biochemical studies of RAD1's role in cardiomyocyte electrophysiology. The full-length GTP-binding protein RAD (Ras associated with diabetes) plays crucial roles in cardiac physiology by regulating basal voltage-dependent L-type calcium currents and mediating beta-adrenergic augmentation of calcium influx in cardiomyocytes. Located at the cell membrane, RAD1 suppresses voltage-gated L-type calcium channels while regulating trafficking of the alpha-1C subunit to the membrane surface. Importantly, it inhibits cardiac hypertrophy through the calmodulin-dependent kinase II (CaMKII) pathway by suppressing CAMK2D phosphorylation and activation, positioning it as a key modulator of heart rate, contractile force, and antiarrhythmic protection.