Recombinant TIAM2 protein (His tag)

Catalog Number	540672
Synonyms	SIF and TIAM1-like exchange factor; T-lymphoma invasion and metastasis-inducing protein 2; TIAM-2
Species	Human
Expression System	E. coli
Accession	Q8IVF5
Molecular Weight	Predictes a molecular mass of 44.19 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 47 kDa band.

Product Information

Sequence Region	1094-1462
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 1094-1462 aa (Q8IVF5) 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 product features a specific fragment (amino acids 1094-1462) of human Rho guanine nucleotide exchange factor TIAM2, designed to encompass the complete DH domain. This fragment serves as an ideal tool for researchers studying the specific guanine nucleotide exchange functions of TIAM2 in cytoskeletal regulation and cellular signaling pathways. TIAM2 (T-lymphoma invasion and metastasis-inducing protein 2) is a key regulatory protein that modulates the activity of RHO-like GTPases, specifically activating RAC1 while not affecting CDC42 and RHOA. It functions as a GDP-dissociation stimulator protein that connects extracellular signals to cytoskeletal activities, mediating laminin signals to activate Rac1 and promote neurite growth. The protein is involved in critical cellular processes including lamellipodial formation, growth cone advancement in embryonic hippocampal neurons, and neuronal migration in the cerebral cortex. TIAM2 localizes to multiple cellular compartments including the cytoplasm, lamellipodia, filopodia, growth cones, neuron projections, and perikaryon, highlighting its diverse roles in cellular architecture and movement. When overexpressed, it induces membrane ruffling with accumulation of actin filaments, demonstrating its direct impact on cytoskeletal reorganization.