

Active Recombinant Human TIAM1 Protein

Cat. No. TIAM1-25H Lot. No. (See product label)

SPECIFICATION

Product Overview	The DH/PH domain of human Tiam1 protein has been produced in a bacterial expression system. It contains an MBP fusion at its amino terminus.
Species	Human
Source	E.coli
Form	White lyophilized powder.
Bio-activity	The biological activity of Tiam1 DHPH can be determined from its ability to catalyze nucleotide exchange on Rac1 using the nucleotide exchange assay of Bodipy-GDP for excess GDP or GTP. Rac1 protein is pre-loaded with Bodipy-FL-GDP by adding excess EDTA e.g. 0.7 mmol EDTA per mmol Mg ²⁺ ions present in the reaction. This sub-stock solution is then used in a dissociation assay format which indicates competition for exchange site with unlabeled nucleotide. The reaction is monitored by fluorescence measurement at 485nm Ex / 535nm Em. Stringent quality control ensures that the exchange rate of Bodipy-GDP or mant-GDP is enhanced at least five fold in the presence of 0.8 μ M Tiam1 DHPH.
Molecular Mass	86 kDa
Purity	Protein purity is determined by scanning densitometry of Coomassie Blue stained protein on a 4-20% polyacrylamide gradient gel. MBP-Tiam1 was determined to be 90% pure.

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Storage	The protein is stable for six months if stored at -70 centigrade.
Storage Buffer	<ol style="list-style-type: none"> 1. MBP-Tiam1 DH/PH protein. 2. Rac1 protein. 3. Exchange buffer 2 (20 mM Tris-HCl pH 7.5, 50 mM NaCl, 1 mM DTT, 2 mM EDTA, 100 g/ml BSA, and 0.75 μM Bodipy-FL-GDP), note - make fresh. 4. 50 mM MgCl₂ in 20 mM Tris-HCl pH 7.5, 50 mM NaCl. 5. 5 mM GTP in 20 mM Tris-HCl pH 7.5, 50 mM NaCl.
Reconstitution	<p>Before reconstitution, briefly centrifuge to collect the product at the bottom of the tube. The protein should be reconstituted to 5 mg/ml with ice cold nanopure water (20 μ water per 100 g protein). When reconstituted, the protein will be in the following buffer: 20 mM Tris pH 7.5, 50 mM NaCl, 1 mM MgCl₂, 5% (v/v) sucrose and 1% (v/v) dextran. In order to maintain high biological activity of the protein it is strongly recommended that the protein solution be supplemented with DTT to 1 mM final concentration, aliquoted into "experiment sized" amounts, snap frozen in liquid nitrogen and stored at -70centigrade. The protein must not be exposed to repeated freeze-thaw cycles. The lyophilized protein is stable at 4centigrade desiccated (<10% humidity) for one year. Further Tiam1 dilutions should be made in 20 mM Tris pH 7.5, 50 mM NaCl, 1 mM MgCl₂ (not supplied).</p>

GENE INFORMATION

Gene Name	TIAM1
Official Symbol	TIAM1 T cell lymphoma invasion and metastasis 1 [Homo sapiens (human)]
Synonyms	TIAM1; T cell lymphoma invasion and metastasis 1; TIAM-1;
Gene ID	7074

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mRNA Refseq	NM_003253
Protein Refseq	NP_003244
MIM	600687
UniProt ID	Q13009

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