Data Sheet (Cat.No.TMPY-01958)

TargetMol

RhoA Protein, Human, Recombinant (His)

General Information

Synonyms:	ras homolog family member A;ARHA;RHO12;RHOH12;ARH12
Protein Construction:	A DNA sequence encoding the human RHOA (P61586-1) (Met 1-Leu 193) was fused with a polyhistidine tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	P61586-1
Molecular Weight:	24 kDa (predicted); 28 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 20 mM Tris, 500 mM NaCl, pH 7.4, 10% glycerol. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Transforming protein RhoA, also known as Rho cDNA clone 12, Ras homolog gene family member A, RHOA and ARH12, is a cell membrane and cytoplasm protein that belongs to the small GTPase superfamily and Rho family. The Rho family of small GTPases plays a key role in the dynamic regulation of the actin cytoskeleton that underlies various important cellular functions such as shape changes, migration, and polarity. RHOA / ARH12 is part of a larger family of related proteins known as the Ras superfamily; proteins involved in the regulation and timing of

cell division. RHOA / ARH12 is a small GTPase protein known to regulate the actin cytoskeleton in the formation of stress fibers. It acts upon two known effector proteins: ROCK1 (Rho-associated, coiled-coil containing protein kinase 1) and DIAPH1 (diaphanous homolog 1 (Drosophila)). RHOA / ARH12 regulates a signal transduction pathway linking plasma membrane receptors to the assembly of focal adhesions and actin stress fibers. RHOA / ARH12 serves as a target for the yopT cysteine peptidase from Yersinia pestis, vector of the plague, and Yersinia pseudotuberculosis, which causes gastrointestinal disorders. RHOA / ARH12 may be an activator of PLCE1. It is activated by ARHGEF2, which promotes the exchange of GDP for GTP.

Reference

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