

## RhoA Protein, Human (sf9, His)

Cat. No.:	HY-P73676
Synonyms:	Transforming protein RhoA; RHOA; ARH12; ARHA; RHO12
Species:	Human
Source:	Sf9 insect cells
Accession:	P61586 (M1-L193)
Gene ID:	387
Molecular Weight:	Approximately 28 kDa

### PROPERTIES

Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 $\mu$ m filtered solution of 20 mM Tris, 500 mM NaCl, pH 7.4, 10% Glycerol. Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization.
Endotoxin Level	<1 EU/ $\mu$ g, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 $\mu$ g/mL in ddH <sub>2</sub> O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

#### Background

RhoA Protein is a small GTPase crucial for orchestrating diverse cellular responses, cycling between an active GTP-bound state and an inactive GDP-bound state. Primarily associated with the organization of the cytoskeleton, the active form of RhoA binds to various effector proteins, influencing cellular processes such as cytoskeletal dynamics, cell migration, and cell cycle progression. It plays a pivotal role in regulating signal transduction pathways that connect plasma membrane receptors to the assembly of focal adhesions and actin stress fibers. Additionally, RhoA is indispensable for microtubule-dependent signals required for myosin contractile ring formation during cell cycle cytokinesis, contributing to cleavage furrow formation. Essential for apical junction formation in keratinocyte cell-cell adhesion, RhoA also participates in the MEMO1-RHOA-DIAPH1 signaling pathway, influencing ERBB2-dependent microtubule stabilization. It further modulates potassium channel activity, regulates guanine nucleotide exchange factors, and acts as a target for the yopT cysteine peptidase from *Yersinia pestis* during microbial infection.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA