

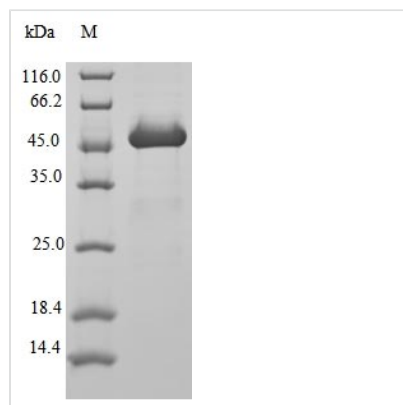


Recombinant Human ADP-ribosylation factor 1 (ARF1)

Product Code	CSB-EP001988HU
Relevance	GTP-binding protein that functions as an allosteric activator of the cholera toxin catalytic subunit, an ADP-ribosyltransferase. Involved in protein trafficking among different compartments. Modulates vesicle budding and uncoating within the Golgi complex. Deactivation induces the redistribution of the entire Golgi complex to the endoplasmic reticulum, suggesting a crucial role in protein trafficking. In its GTP-bound form, it triggers the association with coat proteins with the Golgi membrane. The hydrolysis of ARF1-bound GTP, which is mediated by ARFGAPs proteins, is required for dissociation of coat proteins from Golgi membranes and vesicles. The GTP-bound form interacts with PICK1 to limit PICK1-mediated inhibition of Arp2/3 complex activity; the function is linked to AMPA receptor (AMPA) trafficking, regulation of synaptic plasticity of excitatory synapses and spine shrinkage during long-term depression (LTD).
Abbreviation	Recombinant Human ARF1 protein
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P84077
Product Type	Recombinant Proteins
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	GNIFANLFKGLFGKKEMRILMVGLDAAGKTTILYKLLGEIVTTIPTIGFNVETVE YKNISFTVWDVGGQDKIRPLWRHYFQNTQGLIFVDSNDRERVNEAREELMR MLAEDELRLDAVLLVFANKQDLPNAMNAEITDKLGLHSLRHRNWWYIQATCATS GDGLYEGLDWLSNQLRNQK
Research Area	Signal Transduction
Source	E.coli
Target Names	ARF1
Protein Names	Recommended name: ADP-ribosylation factor 1
Expression Region	2-181aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 10xHis-GST-tagged and C-terminal Myc-tagged
Mol. Weight	55.7kDa
Protein Length	Full Length of Mature Protein



Image



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

Amino acids 2-181 constitute the expression domain of recombinant Human ARF1. The calculated molecular weight for this ARF1 protein is 55.7 kDa. This ARF1 recombinant protein is manufactured in e.coli. The N-terminal 10xHis-GST tag and C-terminal Myc tag was fused into the coding gene segment of ARF1, making it easier to detect and purify the ARF1 recombinant protein in the later stages of expression and purification.

ADP-ribosylation factor 1 (ARF1) is a critical protein involved in intracellular membrane transport and signal transduction. Some studies indicates that ARF1 plays a crucial role in the highly dynamic endoplasmic reticulum-Golgi apparatus-cell membrane system. Actually, ARF1 stands out for its role in controlling the secretion pathway. As a GTPase, ARF1 controls the formation and fusion of intracellular membrane vesicles by transitioning between active and inactive states on the membrane. This is vital for fundamental cellular processes such as intracellular protein transport, secretion, and endocytosis. In addition, ARF1 is implicated in regulating the dynamic balance of the cell cytoskeleton and cell polarity. It influences the invasion and metastasis of tumor cells and plays a role in synapse formation in neurons.

Shelf Life

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