Data Sheet (Cat.No.TMPH-02697)

TargetMol

GNA12 Protein, Mouse, Recombinant (His & Myc)

General Information

Synonyms:	Gna12;G alpha-12;Guanine nucleotide-binding protein subunit alpha-12;Gna-12;G-protein subunit alpha-12
Protein Construction:	1-379 aa
Species:	Mouse
Expression Host:	E. coli
Accession:	P27600
Molecular Weight:	51.5 kDa (predicted)
AA Sequence:	MSGVVRTLSRCLLPAEAGARERRAGAARDAEREARRRSRDIDALLARERRAVRRLVKILLLGAGESGKSTFLKQ MRIIHGREFDQKALLEFRDTIFDNILKGSRVLVDARDKLGIPWQHSENEKHGMFLMAFENKAGLPVEPATFQL YVPALSALWRDSGIREAFSRRSEFQLGESVKYFLDNLDRIGQLNYFPSKQDILLARKATKGIVEHDFVIKKIPFK MVDVGGQRSQRQKWFQCFDGITSILFMVSSSEYDQVLMEDRRTNRLVESMNIFETIVNNKLFFNVSIILFLNK MDLLVEKVKSVSIKKHFPDFKGDPHRLEDVQRYLVQCFDRKRRNRSKPLFHHFTTAIDTENIRFVFHAVKDTIL QENLKDIMLQ

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 85% as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	If the delivery form is liquid, the default storage buffer is Tris/PBS-based buffer, 5%-50% glycerol. If the delivery form is lyophilized powder, the buffer before lyophilization is Tris/PBS-based buffer, 6% Trehalose, pH 8.0.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in sterile deionized water. The product concentration should not be less than 100 μg/mL. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

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

Guanine nucleotide-binding proteins (G proteins) are involved as modulators or transducers in various transmembrane signaling systems. Activates effector molecule RhoA by binding and activating RhoGEFs (ARHGEF12/LARG). GNA12-dependent Rho signaling subsequently regulates transcription factor AP-1 (activating protein-1). GNA12-dependent Rho signaling also regulates protein phosphatese 2A activation causing dephosphorylation of its target proteins. Promotes tumor cell invasion and metastasis by activating RhoA/ROCK signaling pathway and up-regulating proinflammatory cytokine production. Inhibits CDH1-mediated cell adhesion in process independent from Rho activation. Together with NAPA promotes CDH5 localization to plasma membrane. May play a role in the control of cell migration through the TOR signaling cascade.

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