

Product Name: Cdc42 Protein G12V mutant
Synonyms: Cell division cycle 42, G25K, CDC42Hs
Catalogue Number: 10109
Source: Human, recombinant full length, His₆-tag
Expression Host: E. coli
Molecular Weight: 21 kDa
Purity: >99% by SDS-PAGE

Introduction: Small GTPases are a super-family of cellular signaling regulators. Cdc42 belongs to the Rho sub-family of GTPases that regulate cell motility, cell division, and gene transcription. GTP binding increases the activity of Cdc42, and the hydrolysis of GTP to GDP renders it inactive. GTP hydrolysis is aided by GTPase activating proteins (GAPs), while exchange of GDP for GTP is facilitated by guanine nucleotide exchange factors (GEFs).

Amino Acid Sequence (1-191, G12V)

MQTIKCVVVGDIVAVGKTCLLISYTTNKFPSEYVPTVFD
NYAVTVMIGGEPYTLGLFDTAGQEDYDRLRPLSYPQTD
VFLVCFSVVSPSSFENVKEKWVPEITHHCPKTPFLLVG
TQIDLRDDPSTIEKLAKNKQKPI TPETAEKLARDLKAV
KYVECSAL TQKGLKNVDFEAILLALEPPEPKKSRRCVL
L

Properties

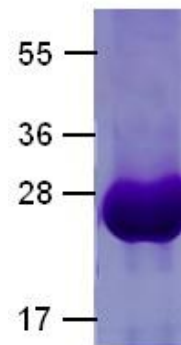
Physical Appearance (form): Frozen protein in 20 mM Tris-HCl, pH 7.4, containing 100 mM NaCl and 10% glycerol.

Physical Appearance (color): Clear, colorless

Storage: -80°C

Preparation Instructions

Adding of 10 mM β -mercaptoethanol or 1 mM DTT into the solution to protect the protein is recommended and using of non-ionic detergents such as n-Dodecyl β -D-maltoside (DoDM) or polyethylene detergents (e.g. C₁₂E₁₀) also help to stabilize the protein. Avoid repeated freezing and thawing.



The purity of His-tagged Cdc42 G12V was determined by SDS-PAGE and Coomassie Brilliant Blue Staining.

References

1. Garrett, W. S. et al., Cell 102: 325-334, 2000.
2. Irie, F. et al., Nature Neurosci. 5: 1117-1118, 2002.
3. Kawasaki, Y. et al., Oncogene 26: 7620-7627, 2007.
4. Manser, E. et al., Nature 363: 364-367, 1993.
5. Musch, A. et al., EMBO J. 20: 2171-2179, 2001.
6. Nalbant, P. et al., Science 305: 1615-1619, 2004.
7. Shen, Y. et al., Dev. Cell 14: 342-353, 2008.
8. Wu, W. J. et al., Nature 405: 800-804, 2000.
9. Wu, X. et al., Genes Dev. 20: 571-585, 2006.
10. Zheng, Y. et al., J. Biol. Chem. 271: 33169-33172, 1996.

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