

**CDC42 PROTEIN****Cdc42 Protein****Cat. #:** 10107**Product Name:** Cdc42 Protein**Synonyms:** Cell division cycle 42, G25K, CDC42Hs**Source:** Human, recombinant full length, His6-tag**Expression Host Species:** E. coli**Molecular Weight:** 21 kDa**Purity:** >95% by SDS-PAGE

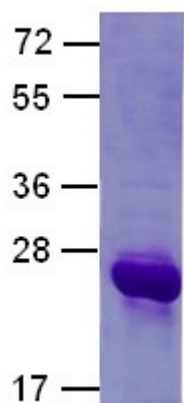
**Introduction:** Small GTPases are a super-family of cellular signaling regulators. Cdc42 belongs to the Rho sub-family of GTPases that regulate cell motility, cell division, and gene transcription. GTP binding increases the activity of Cdc42, and the hydrolysis of GTP to GDP renders it inactive. GTP 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)**

**MQTIKCVVVGDAVGKTCLLISYTTNKFPSYVPTVFDNYAVTVMIGGEPYTLGLFDTAGQEDYDRL  
RPLSYPQTDVFLVCFVSVSPSSFENVKEKWVPEITHHCPTKPFLLVGTQIDLRDDPSTIEKLAKNKQ  
KPITPETAEKLRDLKAVKYVECSALTQKGLKNVFDEAILAALEPPEPKKSRRCVLL**

**Properties****Physical Appearance (form):** Dissolved in 20mM Tris-HCl, pH8.0, 150mM NaCl.**Physical Appearance (form):** White or clear**Concentration:** 1 mg/mL**Storage:** -80°C**Preparation Instructions:**

Centrifuge the vial before open the cap and reconstitute in water. Adding of 10 mM  $\beta$ -mercaptoethanol or 1 mM DTT into the solution to protect the protein is recommended and using of non-ionic detergents such as n-Dodecyl  $\beta$ -D-maltoside (DoDM) or polyethylene detergents (e.g. C12E10) also help to stabilize the protein. Avoid repeated freezing and thawing after reconstitution. The purity of His-tagged Cdc42 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.