

Recombinant human c-Myc protein (Active) ab169901

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Description

Product name	Recombinant human c-Myc protein (Active)
Biological activity	<p>Reprogramming mouse fibroblast cell to iPS cells using 3 retroviral vectors, which carry Oct4, Sox2 & Klf4 with this protein as replacement assay. 8 µg/ml of human Klf4-11R were added in reprogramming medium every 48 hours for 20 days.</p> <p>Intracellular protein penetration rate was tested using DyLight labeled ab169901 protein at 1 µg/ml for 30 min incubation for human fibroblast cells at 37°C. More than 90% cell will be positive one hour after sample incubation.</p>
Purity	<p>> 93 % SDS-PAGE.</p> <p>ab169901 was expressed in E. coli as inclusion bodies, solubilized, refolded, and further purified.</p>
Endotoxin level	= 5.000 Eu/µg
Expression system	Escherichia coli
Accession	<u>P01106-2</u>
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human
Sequence	

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MDFFRVVENQQPPATMPLNVSFTNRNYDLDYDSVQPYFY
CDEEENFYQQQ
QQSELQPPAPSEDWKKFELLPTPPLSPRRSGLCSPSY
VAVTPFSLRGD
NDGGGGSFSTADQLEM/TELLGGDMVNSFCIDPDDETFF
KNIIQDCMW
SGFSAAAKLVSEKLASYQAARKDSGSPNPARGHVCST
SSLYLQDLSAAA
SECIDPSVVPYPLNDSSSPKSCASQDSSAFSPSSDSSL
SSTESSPQGSF
EPLVLHEETPPTTSSDSEEEQEDEEEIDVVSVEKRQAPG
KRSESGSPSAG
GHSKPPHSPLVLKRCHVSTHQHNYAAPPSTRKDYPAAKR
VKLDSVRVLRQ
ISNNRKCTSPRSSDTEENVKRRTHNVLERQRRNELKRSFF
ALRDQIPELE
NNEKAPKVVLKKATAYILSVQAEEQKLISEEDLLRKRREQ
  
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Predicted molecular weight	53 kDa
Amino acids	1 to 454
Additional sequence information	Please note that ab169901 is isoform 2 of UniProt accession P01106. (NP_002458.2) C-terminal 11R tag : ESGGGGSPGRRRRRRRRRRR

Specifications

Our **Abpromise guarantee** covers the use of **ab169901** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	Western blot
	Functional Studies
	SDS-PAGE
	Mass Spectrometry

Form Liquid

Additional notes ab169901 is fused to an eleven arginine (11R) membrane penetration domain at the C terminus to enable penetration across the plasma membrane of mammalian cells.

Cellular Toxicity: This recombinant protein was tested on mouse embryonic stem cells up to 50 µg/ml in culture medium. Suggested reprogramming protein concentration is between 0.5 to 8 µg / ml for both human and mouse fibroblast cells applications.

Preparation and Storage

Stability and Storage Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.

pH: 7.50
Constituent: 0.24% Tris

Proprietary formulation of NaCl, KCl, CaCl₂, MgCl₂, Arginine, DTT and glycerol.

This product is an active protein and may elicit a biological response in vivo, handle with caution.

General Info

Function Participates in the regulation of gene transcription. Binds DNA in a non-specific manner, yet also specifically recognizes the core sequence 5'-CAC[GA]TG-3'. Seems to activate the transcription of growth-related genes.

Involvement in disease Note=Overexpression of MYC is implicated in the etiology of a variety of hematopoietic tumors. Note=A chromosomal aberration involving MYC may be a cause of a form of B-cell chronic lymphocytic leukemia. Translocation t(8;12)(q24;q22) with BTG1. Defects in MYC are a cause of Burkitt lymphoma (BL) [MIM:113970]. A form of undifferentiated malignant lymphoma commonly manifested as a large osteolytic lesion in the jaw or as an abdominal mass. Note=Chromosomal aberrations involving MYC are usually found in Burkitt lymphoma. Translocations t(8;14), t(8;22) or t(2;8) which juxtapose MYC to one of the heavy or light chain immunoglobulin gene loci.

Sequence similarities	Contains 1 basic helix-loop-helix (bHLH) domain.
Post-translational modifications	<p>Phosphorylated by PRKDC. Phosphorylation at Thr-58 and Ser-62 by GSK3 is required for ubiquitination and degradation by the proteasome.</p> <p>Ubiquitinated by the SCF(FBXW7) complex when phosphorylated at Thr-58 and Ser-62, leading to its degradation by the proteasome. In the nucleoplasm, ubiquitination is counteracted by USP28, which interacts with isoform 1 of FBXW7 (FBW7alpha), leading to its deubiquitination and preventing degradation. In the nucleolus, however, ubiquitination is not counteracted by USP28, due to the lack of interaction between isoform 4 of FBXW7 (FBW7gamma) and USP28, explaining the selective MYC degradation in the nucleolus. Also polyubiquitinated by the DCX(TRUSS) complex.</p>
Cellular localization	Nucleus > nucleoplasm. Nucleus > nucleolus.

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