

Active Recombinant Human MYC

Cat. No. MYC-1028H **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Species Human

Source Sf9 Cells

Description

The universal deregulation of c-myc gene expression in tumor cells suggests that this oncogene represents an attractive target for cancer therapeutic purposes. The structural and biochemical features of the MYC family (MYC, N-MYC, and L-MYC) mark them as direct regulators of gene expression. As basic helix-loop-helix leucine zipper proteins (bHLH-ZIP), the MYCs acquire the capacity to bind the DNA sequence CACGTG (E-box) when dimerized with MAX (another bHLH-ZIP). A head-to-tail pair of MYC-MAX dimers may, in turn, form a heterotetramer capable of bridging distant E-boxes. Among the broadly distributed positive enforcers of MYC action that are often recruited to target genes are chromatin remodeling (SWI/SNF relatives) and modifying complexes (TRAPP/GCN5 and relatives); these complexes mobilize nucleosomes and acetylate histones and/or other targets to activate gene expression. MYC binds TBP along an auxiliary pathway to control gene expression. MAD and MNT generally oppose MYC action by enlisting histone deacetylase complexes. Besides acting at the level of chromatin, MYC may also operate at later stages of the transcription cycle, after pre-initiation complex formation. In addition to using generic chromatin complexes to up- or down-regulate transcription, the MYC network also conscripts individual factors to modify expression locally on an ad hoc basis. For example, YY1, AP2, MIZ1, SP1, BRCA1, and other proteins interact directly with MYC, and so may directly modify the output of the MYC network.

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Recombinant c-myc was expressed in a baculovirus system and purified by an affinity column in combination with FPLC chromatography. The purified recombinant protein is greater than 90% homogeneous and contains no detectable protease, DNase, and RNase activity.

Application	C-myc has been applied in DNA and protein-protein interaction assays.
Usage	For in vitro use only.
Form	Liquid. Supplied in 20 mM Tris-HCl pH 8.0, 100 mM KCl, 0.2 mM EDTA, 1 mM DTT, 20% glycerol.
Activity	100 ng are sufficient for a protein-protein interaction assay.
Purity	> 95% by SDS-PAGE.
Storage	Quality guaranteed for 12 months, Store at -80°C. Avoid freeze / thaw cycles.

GENE INFORMATION

Gene Name	MYC v-myc myelocytomatosis viral oncogene homolog (avian) [Homo sapiens]
Synonyms	MYC; v-myc myelocytomatosis viral oncogene homolog (avian); MRTL; c-Myc; bHLHe39; avian myelocytomatosis viral oncogene homolog; v-myc avian myelocytomatosis viral oncogene homolog; myc-related translation/localization regulatory factor
Gene ID	4609
mRNA Refseq	NM_002467

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Protein Refseq	NP_002458
MIM	190080
UniProt ID	P01106
Chromosome Location	8q24
Pathway	Acute myeloid leukemia; Bladder cancer; Chronic myeloid leukemia; Colorectal cancer; ErbB signaling pathway; Colorectal cancer; Jak-STAT signaling pathway; MAPK signaling pathway; Pathways in cancer; Small cell lung cancer; Small cell lung cancer; Thyroid cancer; Wnt signaling pathway
Function	protein binding; transcription factor activity
Structure of the c-Myc.	