# Active Recombinant Human MYC

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

## SPECIFICATION

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| **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

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| **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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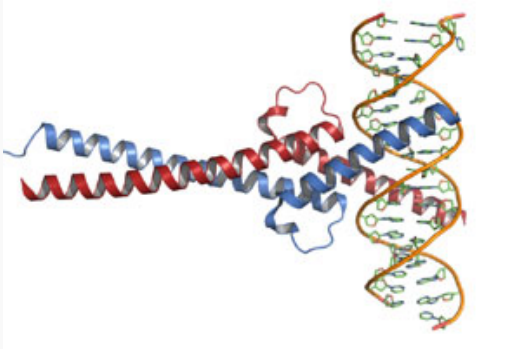
| **Protein Refseq** | NP_002458 |
| **MIM** | 190080 |
| **UniProt ID** | P01106 |
| **Chromosome Location** | 8q24 |
| **Pathway** | Acute myeloid leukemia; Bladder cancer; Chronic myeloid leukemia; Colorectal cancer; ErbB signaling pathway; Colorectal cancer; Jak-STAT signaling pathway; MAPK signaling 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.** |  |

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