



## c-Myc (Phospho Thr58) Rabbit pAb

Catalog#: AP0069 | Size: 30μL/50μL/100μL

### Main Information

Target	Host Species	Reactivity	Application	MW	Conjugated/Modification
c-Myc	Rabbit	Human, Mouse, Rat	WB, IHC, IF, IP, ELISA	50kD,(also ~60kD in some samples) (Observed)	Phospho

### Detailed Information

Recommended Dilution Ratio	WB 1:500-1:2000; IHC 1:100-1:300; IP 2-5 ug/mg lysate; ELISA 1:10000; IF 1:50-200
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Specificity	Phospho-c-Myc (T58) Polyclonal Antibody detects endogenous levels of c-Myc protein only when phosphorylated at T58.The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites):LPtPP
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Storage	-15°C to -25°C/1 year(Do not lower than -25°C)
Concentration	1 mg/ml
MW(Observed)	50kD,(also ~60kD in some samples)
Modification	Phospho
Clonality	Polyclonal
Isotype	IgG



## Antigen&Target Information

Immunogen	The antiserum was produced against synthesized peptide derived from human Myc around the phosphorylation site of Thr58. AA range:25-74
Specificity	Phospho-c-Myc (T58) Polyclonal Antibody detects endogenous levels of c-Myc protein only when phosphorylated at T58. The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites):LPtPP
Gene Name	MYC
Protein Name	Myc proto-oncogene protein
Other Name	MYC ;BHLHE39 ;Myc proto-oncogene protein ;Class E basic helix-loop-helix protein 39 ;bHLHe39 ;Proto-oncogene c-Myc ;Transcription factor p64

## Database Link

Organism	Gene ID	SwissProt
Human	4609	P01106
Mouse	17869	P01108
Rat	24577	P09416

## Background

The protein encoded by this gene is a multifunctional, nuclear phosphoprotein that plays a role in cell cycle progression, apoptosis and cellular transformation. It functions as a transcription factor that regulates transcription of specific target genes. Mutations, overexpression, rearrangement and translocation of this gene have been associated with a variety of hematopoietic tumors, leukemias and lymphomas, including Burkitt lymphoma. There is evidence to show that alternative translation initiations from an upstream, in-frame non-AUG (CUG) and a downstream AUG start site result in the production of two isoforms with distinct N-termini. The synthesis of non-AUG initiated protein is suppressed in Burkitt's lymphomas, suggesting its importance in the normal function of this gene. [provided by RefSeq, Jul 2008].

## Function

Disease: 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. Disease: Overexpression of MYC is implicated in the etiology of a variety of hematopoietic tumors. Function: Participates in the regulation of gene transcription. Binds DNA both in a non-specific manner and also specifically to recognizes the core sequence 5'-CAC[GA]TG-3'. Seems to activate the transcription of growth-related genes. online information: Myc entry, PTM: Phosphorylated by PRKDC. similarity: Contains 1 basic helix-loop-helix (bHLH) domain. subunit: Efficient DNA binding requires dimerization with another bHLH protein. Binds DNA as a heterodimer with MAX. Interacts with TAF1C and SPAG9. Interacts with PARP10. Interacts with KDM5A and KDM5B.



## Cellular Localization

Nucleus, nucleoplasm . Nucleus, nucleolus .

## Tissue Expression

Cervix, Epithelium, Leukemia, Placenta, Promyelocytic I

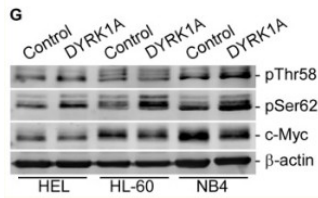
## Research Areas

- MAPK signaling pathway
- ErbB signaling pathway
- Cell cycle
- PI3K-Akt signaling pathway
- Cellular senescence
- Wnt signaling pathway
- TGF-beta signaling pathway
- Hippo signaling pathway
- Signaling pathways regulating pluripotency of stem cells
- JAK-STAT signaling pathway
- Thyroid hormone signaling pathway
- Salmonella infection
- Hepatitis C
- Hepatitis B
- Human cytomegalovirus infection
- Human T-cell leukemia virus 1 infection
- Kaposi sarcoma-associated herpesvirus infection
- Epstein-Barr virus infection
- Pathways in cancer
- Transcriptional misregulation in cancer
- Proteoglycans in cancer
- MicroRNAs in cancer
- Chemical carcinogenesis - receptor activation
- Colorectal cancer
- Endometrial cancer
- Thyroid cancer
- Bladder cancer
- Chronic myeloid leukemia
- Acute myeloid leukemia
- Small cell lung cancer
- Breast cancer
- Hepatocellular carcinoma
- Gastric cancer
- Central carbon metabolism in cancer

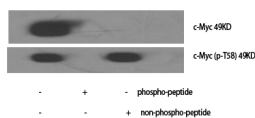
## Signaling Pathway

Cellular Processes >> Cell growth and death >> Cell cycle  
 Cellular Processes >> Cell growth and death >> Cellular senescence  
 Cellular Processes >> Cellular community - eukaryotes >> Signaling pathways regulating pluripotency of stem cells  
 Organismal Systems >> Endocrine system >> Thyroid hormone signaling pathway  
 Human Diseases >> Cancer: overview >> Pathways in cancer  
 Human Diseases >> Cancer: overview >> Transcriptional misregulation in cancer  
 Human Diseases >> Cancer: overview >> MicroRNAs in cancer  
 Human Diseases >> Cancer: overview >> Central carbon metabolism in cancer  
 Human Diseases >> Cancer: specific types >> Colorectal cancer  
 Human Diseases >> Cancer: specific types >> Hepatocellular carcinoma  
 Human Diseases >> Cancer: specific types >> Gastric cancer  
 Human Diseases >> Cancer: specific types >> Thyroid cancer  
 Human Diseases >> Cancer: specific types >> Acute myeloid leukemia  
 Human Diseases >> Cancer: specific types >> Chronic myeloid leukemia  
 Human Diseases >> Cancer: specific types >> Bladder cancer  
 Human Diseases >> Cancer: specific types >> Endometrial cancer  
 Human Diseases >> Cancer: specific types >> Breast cancer  
 Human Diseases >> Cancer: specific types >> Small cell lung cancer  
 Environmental Information Processing >> Signal transduction >> MAPK signaling pathway  
 Environmental Information Processing >> Signal transduction >> ErbB signaling pathway  
 Environmental Information Processing >> Signal transduction >> Wnt signaling pathway  
 Environmental Information Processing >> Signal transduction >> TGF-beta signaling pathway  
 Environmental Information Processing >> Signal transduction >> Hippo signaling pathway  
 Environmental Information Processing >> Signal transduction >> JAK-STAT signaling pathway  
 Environmental Information Processing >> Signal transduction >> PI3K-Akt signaling pathway

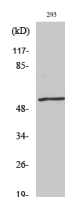
## Validation Data



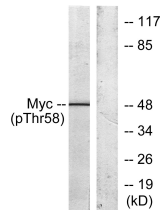
Liu, Qiang, et al. "Tumor suppressor DYRK1A effects on proliferation and chemoresistance of AML cells by downregulating c-Myc." PloS one 9.6 (2014): e98853.



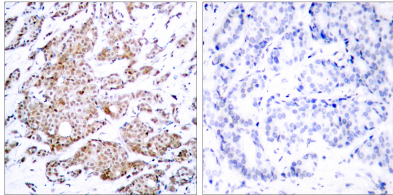
Western Blot analysis of various cells using Phospho-c-Myc (T58) Polyclonal Antibody diluted at 1:500



Western Blot analysis of 293 cells using Phospho-c-Myc (T58) Polyclonal Antibody diluted at 1:500



Western blot analysis of lysates from ovary cancer, using Myc (Phospho-Thr58) Antibody. The lane on the right is blocked with the phospho peptide.



Immunohistochemistry analysis of paraffin-embedded human breast carcinoma, using Myc (Phospho-Thr58) Antibody. The picture on the right is blocked with the phospho peptide.

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