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Phospho-MYC(T58) Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP3325a

Product Information

Application	DB, WB, E
Primary Accession	P01106
Other Accession	P09416, Q29031, P01108, P01109, Q2HJ27, P24793, Q63379, P03966, P04198, Q9PSJ0, P18444, P15171, Q7ZVS9, P52160, P06171
Reactivity	Human
Predicted	Xenopus, Zebrafish, Chicken, Mouse, Rat, Bovine, Pig
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	50565

Additional Information

Gene ID	4609
Other Names	Myc proto-oncogene protein, Class E basic helix-loop-helix protein 39, bHLHe39, Proto-oncogene c-Myc, Transcription factor p64, MYC, BHLHE39
Target/Specificity	This MYC Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding T58 of human MYC.
Dilution	DB~~1:500 WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Phospho-MYC(T58) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MYC
Synonyms	BHLHE39
Function	Transcription factor that binds DNA in a non-specific manner, yet also

	specifically recognizes the core sequence 5'-CAC[GA]TG-3' (PubMed:24940000, PubMed:25956029). Activates the transcription of growth-related genes (PubMed:24940000, PubMed:25956029). Binds to the VEGFA promoter, promoting VEGFA production and subsequent sprouting angiogenesis (PubMed:24940000, PubMed:25956029). Regulator of somatic reprogramming, controls self-renewal of embryonic stem cells (By similarity). Functions with TAF6L to activate target gene expression through RNA polymerase II pause release (By similarity). Positively regulates transcription of HNRNPA1, HNRNPA2 and PTBP1 which in turn regulate splicing of pyruvate kinase PKM by binding repressively to sequences flanking PKM exon 9, inhibiting exon 9 inclusion and resulting in exon 10 inclusion and production of the PKM M2 isoform (PubMed:20010808).
Cellular Location	Nucleus, nucleoplasm. Nucleus, nucleolus. Nucleus. Cytoplasm Chromosome. Note=Association with chromatin is reduced by hyperphosphorylation (PubMed:30158517) Localization to the nucleolus is dependent on HEATR1 (PubMed:38225354)

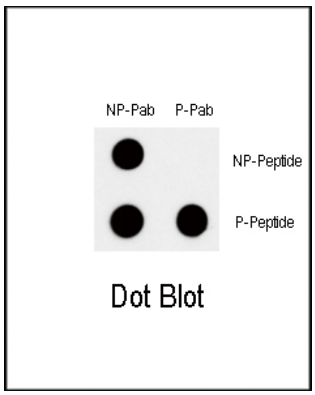
Background

MYC participates in the regulation of gene transcription. It binds DNA both in a non-specific manner and also specifically to recognizes the core sequence 5'-CAC[GA]TG-3'. This protein appears to activate the transcription of growth-related genes. Overexpression of MYC is implicated in the etiology of a variety of hematopoietic tumors. A chromosomal aberration involving MYC may be a cause of a form of B-cell chronic lymphocytic leukemia.

References

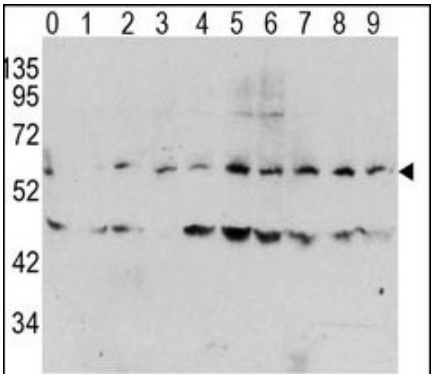
Qi, Y., et al., Nature 431(7009):712-717 (2004).
Wilda, M., et al., Genes Chromosomes Cancer 41(2):178-182 (2004).
Dom, et al., Oncogene 23(44):7378-7390 (2004).
Pap, T., et al., Arthritis Rheum. 50(9):2794-2802 (2004).
Ozawa, N., et al., Endocrinology 145(9):4244-4250 (2004).

Images



Dot blot analysis of Phospho-MYC-T58 Pab (Cat.AP3325a) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antibody working concentrations are 0.5ug per ml.

Western blot analysis of Phospho-MYC-T58 Antibody in human TPA activated Hela cell line lysates. Phospho-MYC (arrow) was detected using the purified PAb. (0: without TPA; 1: 60ug/ml TPA, 15min; 2: 60ug/ml TPA, 30min; 3: 60ug/ml TPA, 45min; 4: 125ug/ml TPA, 15min; 5: 125ug/ml TPA, 30min; 6: 125ug/ml TPA, 45min; 7: 250ug/ml TPA, 15min; 8: 250ug/ml TPA, 30min; 9:



250ug/ml, 45min)

Citations

- IKKB kinases increase Myc protein stability and enhance progression of breast cancer cells.