ARG62962
anti-Myc tag antibody [9E10]

Package: 100 µg
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody [9E10] recognizes Myc tag
Tested Reactivity	Other
Tested Application	CyTOF®-candidate, FACS, IHC-P, IP, WB
Specificity	The clone 9E10 may be used to detect the c-Myc tag. The c-myc gene (8q24 on human chromosome) is the cellular homologue of the v-myc gene originally isolated from an avian myelocytomatosis virus. The c-Myc protein is a transcription factor (nuclear localization). c-Myc is commonly activated in a variety of tumor cells and plays an important role in cellular proliferation, differentiation, apoptosis and cell cycle progression. The phosphorylation of c-Myc has been investigated and previous studies have suggested a functional association between phosphorylation at Thr58/Ser62 by glycogen synthase kinase 3, cyclin-dependent kinase, ERK2 and C-Jun N-terminal Kinase (JNK) in cell proliferation and cell cycle regulation. In normal cells the expression of c-Myc is tightly regulated but in human cancers c-Myc is frequently deregulated. c-Myc is also essential for tumor cell development in vasculogenesis and angiogenesis that distribute blood throughout the cells.
Host	Mouse
Clonality	Monoclonal
Clone	9E10
Isotype	IgG1
Target Name	Myc tag
Species	Human
Immunogen	Synthetic peptide sequence (AEEQKLISEEDLL) corresponding to the C-terminal region of Human Myc
Conjugation	Un-conjugated
Alternate Names	c-Myc; MRTL; MYCC; Class E basic helix-loop-helix protein 39; Proto-oncogene c-Myc; bHLHe39; Myc proto-oncogene protein; Transcription factor p64

Application Instructions

Application table

Application	Dilution
CyTOF®-candidate	Assay-dependent
FACS	1 - 4 µg/ml
IHC-P	5 - 10 µg/ml
IP	1 - 5 µg/ml
WB	0.5 - 2 µg/ml

Application Note

FACS: Membrane permeabilization is required.
IP: Not suitable for IP of native c-Myc protein.
* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Positive Control	WB: c-Myc tagged protein IHC-P: Perfused brain sections, liver and spleen

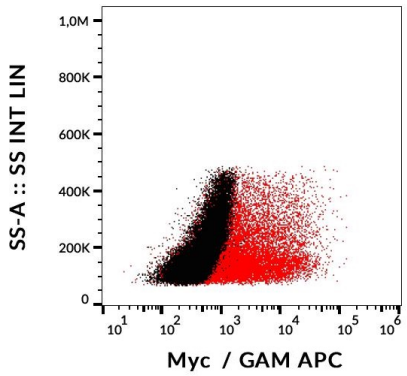
Properties

Form	Liquid
Purification	Purified by protein A
Purity	> 95% (by SDS-PAGE)
Buffer	PBS (pH 7.4) and 15 mM Sodium azide
Preservative	15 mM Sodium azide
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C or below. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

Gene Symbol	MYC
Gene Full Name	v-myc avian myelocytomatosis viral oncogene homolog
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	Transcription factor that binds DNA in a non-specific manner, yet also specifically recognizes the core sequence 5'-CAC[GA]TG-3'. Activates the transcription of growth-related genes. [UniProt]
Research Area	Cancer antibody; Controls and Markers antibody; Developmental Biology antibody; Gene Regulation antibody; Signaling Transduction antibody
PTM	Phosphorylated by PRKDC. Phosphorylation at Ser-329 by PIM2 leads to the stabilization of MYC (By similarity). Phosphorylation at Ser-62 by CDK2 prevents Ras-induced senescence. Phosphorylated at Ser-62 by DYRK2; this primes the protein for subsequent phosphorylation by GSK3B at Thr-58. Phosphorylation at Thr-58 and Ser-62 by GSK3 is required for ubiquitination and degradation by the proteasome. 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. Ubiquitinated by TRIM6 in a phosphorylation-independent manner (By similarity).

Images



ARG62962 anti-Myc tag antibody [9E10] FACS image

Flow Cytometry: LST1-Myc transfected HEK293 cells (red) and nontransfected HEK293 cells (black) stained with ARG62962 anti-Myc tag antibody [9E10], followed by incubation with APC labelled Goat anti-Mouse secondary antibody.