

ARG43135 anti-FOXK1 / MNF antibody

Package: 50 µg
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes FOXK1 / MNF
Tested Reactivity	Hu, Ms, Rat
Tested Application	FACS, ICC/IF, IHC-P, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	FOXK1 / MNF
Species	Human
Immunogen	Recombinant protein corresponding to Q175-E671 of Human FOXK1 / MNF.
Conjugation	Un-conjugated
Alternate Names	Myocyte nuclear factor; FOXK1L; MNF; Forkhead box protein K1

Application Instructions

Application table	Application	Dilution
	FACS	1:150 - 1:500
	ICC/IF	1:200 - 1:1000
	IHC-P	1:200 - 1:1000
	WB	1:500 - 1:2000
Application Note	IHC-P: Antigen Retrieval: Heat mediation was performed in EDTA buffer (pH 8.0). * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	
Observed Size	~ 95 kDa	

Properties

Form	Liquid
Purification	Immunogen affinity purified.
Buffer	0.2% Na ₂ HPO ₄ , 0.9% NaCl, 0.05% Sodium azide and 4% Trehalose.
Preservative	0.05% Sodium azide
Stabilizer	4% Trehalose
Concentration	0.5 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

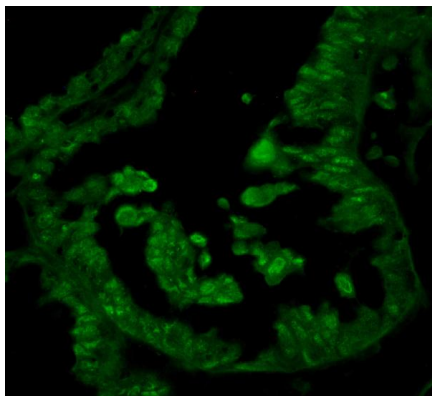
freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

Note For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

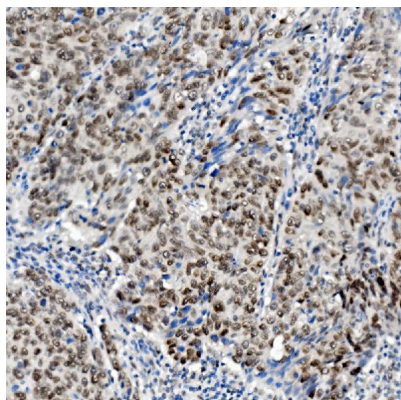
Gene Symbol	FOXK1
Gene Full Name	forkhead box K1
Function	<p>Transcriptional regulator involved in different processes such as glucose metabolism, aerobic glycolysis, muscle cell differentiation and autophagy (By similarity). Recognizes and binds the forkhead DNA sequence motif (5'-GTAAACA-3') and can both act as a transcription activator or repressor, depending on the context (PubMed:17670796). Together with FOXK2, acts as a key regulator of metabolic reprogramming towards aerobic glycolysis, a process in which glucose is converted to lactate in the presence of oxygen (By similarity). Acts by promoting expression of enzymes for glycolysis (such as hexokinase-2 (HK2), phosphofructokinase, pyruvate kinase (PKLR) and lactate dehydrogenase), while suppressing further oxidation of pyruvate in the mitochondria by up-regulating pyruvate dehydrogenase kinases PDK1 and PDK4 (By similarity). Probably plays a role in gluconeogenesis during overnight fasting, when lactate from white adipose tissue and muscle is the main substrate (By similarity). Involved in mTORC1-mediated metabolic reprogramming: in response to mTORC1 signaling, translocates into the nucleus and regulates the expression of genes associated with glycolysis and downstream anabolic pathways, such as HIF1A, thereby regulating glucose metabolism (By similarity). Together with FOXK2, acts as a negative regulator of autophagy in skeletal muscle: in response to starvation, enters the nucleus, binds the promoters of autophagy genes and represses their expression, preventing proteolysis of skeletal muscle proteins (By similarity). Acts as a transcriptional regulator of the myogenic progenitor cell population in skeletal muscle (By similarity). Binds to the upstream enhancer region (CCAC box) of myoglobin (MB) gene, regulating the myogenic progenitor cell population (By similarity). Promotes muscle progenitor cell proliferation by repressing the transcriptional activity of FOXO4, thereby inhibiting myogenic differentiation (By similarity). Involved in remodeling processes of adult muscles that occur in response to physiological stimuli (By similarity). Required to correct temporal orchestration of molecular and cellular events necessary for muscle repair (By similarity). Represses myogenic differentiation by inhibiting MEFC activity (By similarity). Positively regulates Wnt/beta-catenin signaling by translocating DVL into the nucleus (PubMed:25805136). Reduces virus replication, probably by binding the interferon stimulated response element (ISRE) to promote antiviral gene expression (PubMed:25852164). [UniProt]</p>
Calculated Mw	75 kDa
Cellular Localization	Nucleus. Cytoplasm. Note=(Microbial infection) Accumulates in the nucleus upon viral infection. [UniProt]

Images



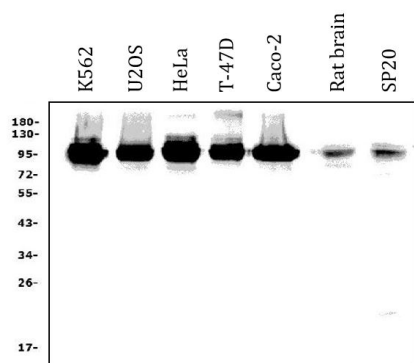
ARG43135 anti-FOXK1 / MNF antibody ICC/IF image

Immunofluorescence: Human ovary cancer cells were blocked with 10% goat serum and then stained with ARG43135 anti-FOXK1 / MNF antibody (green) at 2 µg/ml dilution, overnight at 4°C.



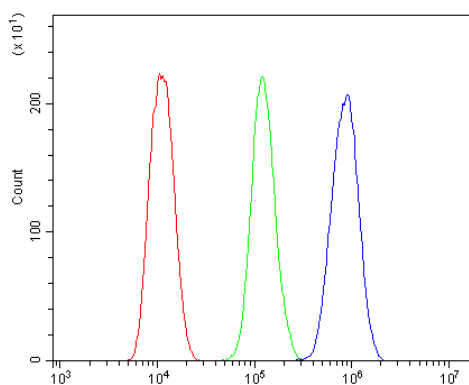
ARG43135 anti-FOXK1 / MNF antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Human lung cancer tissue. Antigen Retrieval: Heat mediation was performed in EDTA buffer (pH 8.0). The tissue section was blocked with 10% goat serum. The tissue section was then stained with ARG43135 anti-FOXK1 / MNF antibody at 1 µg/ml dilution, overnight at 4°C.



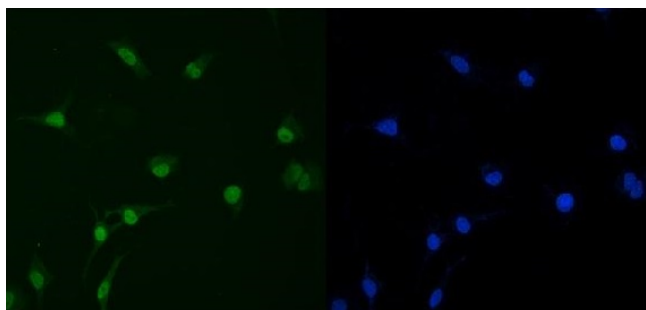
ARG43135 anti-FOXK1 / MNF antibody WB image

Western blot: 50 µg of sample under reducing conditions. K562, U2OS, HeLa, T-47D, Caco-2, Rat brain and SP20 cell lysates stained with ARG43135 anti-FOXK1 / MNF antibody at 0.25 µg/ml dilution, overnight at 4°C.



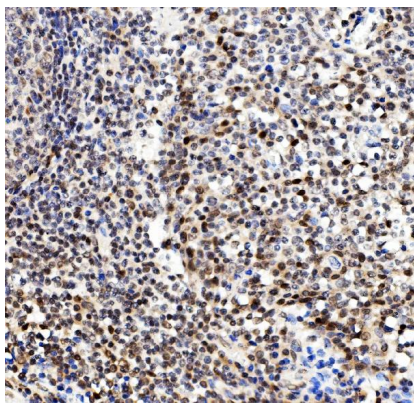
ARG43135 anti-FOXK1 / MNF antibody FACS image

Flow Cytometry: THP-1 cells were blocked with 10% normal goat serum and then stained with ARG43135 anti-FOXK1 / MNF antibody (blue) at 1 µg/10⁶ cells for 30 min at 20°C, followed by incubation with DyLight®488 labelled secondary antibody. Isotype control antibody (green) was rabbit IgG (1 µg/10⁶ cells) used under the same conditions. Unlabelled sample (red) was also used as a control.



ARG43135 anti-FOXK1 / MNF antibody ICC/IF image

Immunofluorescence: A549 cells were blocked with 10% goat serum and then stained with ARG43135 anti-FOXK1 / MNF antibody (green) at 2 µg/ml dilution, overnight at 4°C. DAPI (blue) for nuclear staining.



ARG43135 anti-FOXK1 / MNF antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Human tonsil tissue.
Antigen Retrieval: Heat mediation was performed in EDTA buffer (pH 8.0). The tissue section was blocked with 10% goat serum. The tissue section was then stained with ARG43135 anti-FOXK1 / MNF antibody at 1 µg/ml dilution, overnight at 4°C.