ARG44064
anti-SIX4 antibody

Package: 50 µg
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal recognizes SIX4
Tested Reactivity	Hu
Tested Application	FACS, ICC/IF, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	SIX4
Species	Human
Immunogen	Human SIX4 recombinant protein (Position: Q387-L781).
Conjugation	Un-conjugated
Alternate Names	SIX4; SIX Homeobox 4; AREC3; Sine Oculis Homeobox Homolog 4; Homeobox Protein SIX4; Sine Oculis Homeobox (Drosophila) Homolog 4; Sine Oculis Homeobox Homolog 4 (Drosophila)

Application Instructions

Application table

Application	Dilution
FACS	1 - 3 µg/1x10^6 cells
ICC/IF	5 µg/ml
WB	0.25 - 0.5 µg/ml

Application Note: The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Properties

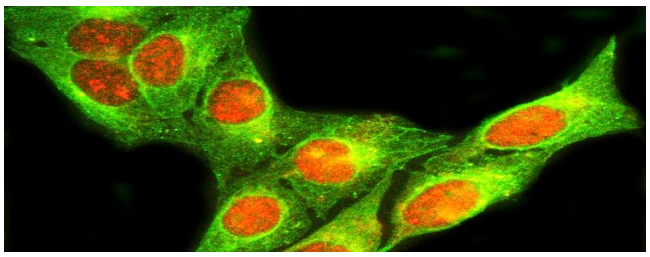
Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	0.9% NaCl, 0.2% Na2HPO4, 0.05% Sodium azide and 4% Trehalose.
Preservative	0.05% Sodium azide
Stabilizer	4% Trehalose
Concentration	0.5 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. 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

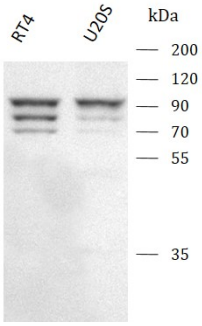
Gene Symbol	SIX4
Gene Full Name	SIX Homeobox 4
Background	This gene encodes a member of the homeobox family, subfamily SIX. The drosophila homolog is a nuclear homeoprotein required for eye development. Studies in mouse show that this gene product functions as a transcription factor, and may have a role in the differentiation or maturation of neuronal cells.
Function	Transcriptional regulator which can act as both a transcriptional repressor and activator by binding a DNA sequence on these target genes and is involved in processes like cell differentiation, cell migration and cell survival. Transactivates gene expression by binding a 5'-[CAT]A[CT][CT][CTG]GA[GAT]-3' motif present in the Trex site and a 5'-TCA[AG][AG]TTNC-3' motif present in the MEF3 site of the muscle-specific genes enhancer. Acts cooperatively with EYA proteins to transactivate their target genes through interaction and nuclear translocation of EYA protein. Acts synergistically with SIX1 to regulate target genes involved in formation of various organs, including muscle, kidney, gonad, ganglia, olfactory epithelium and cranial skeleton. Plays a role in several important steps of muscle development. Controls the genesis of hypaxial myogenic progenitors in the dermomyotome by transactivating PAX3 and the delamination and migration of the hypaxial precursors from the ventral lip to the limb buds through the transactivation of PAX3, MET and LBX1. Controls myoblast determination by transactivating MYF5, MYOD1 and MYF6. Controls somitic differentiation in myocyte through MYOG transactivation. Plays a role in synaptogenesis and sarcomere organization by participating in myofiber specialization during embryogenesis by activating fast muscle program in the primary myotome resulting in an up-regulation of fast muscle genes, including ATP2A1, MYL1 and TNNT3. Simultaneously, is also able to activate inhibitors of slow muscle genes, such as SOX6, HRASLS, and HDAC4, thereby restricting the activation of the slow muscle genes. During muscle regeneration, negatively regulates differentiation of muscle satellite cells through down-regulation of MYOG expression. During kidney development regulates the early stages of metanephros development and ureteric bud formation through regulation of GDNF, SALL1, PAX8 and PAX2 expression. Plays a role in gonad development by regulating both testis determination and size determination. In gonadal sex determination, transactivates ZFPM2 by binding a MEF3 consensus sequence, resulting in SRY up-regulation. In gonadal size determination, transactivates NR5A1 by binding a MEF3 consensus sequence resulting in gonadal precursor cell formation regulation. During olfactory development mediates the specification and patterning of olfactory placode through fibroblast growth factor and BMP4 signaling pathways and also regulates epithelial cell proliferation during placode formation. Promotes survival of sensory neurons during early trigeminal gangliogenesis. In the developing dorsal root ganglia, up-regulates SLC12A2 transcription. Regulates early thymus/parathyroid organogenesis through regulation of GCM2 and FOXN1 expression. Forms gustatory papillae during development of the tongue. Also plays a role during embryonic cranial skeleton morphogenesis.
Calculated Mw	83 kDa
PTM	Acetylation, Phosphoprotein
Cellular Localization	Cytoplasm, Nucleus

Images



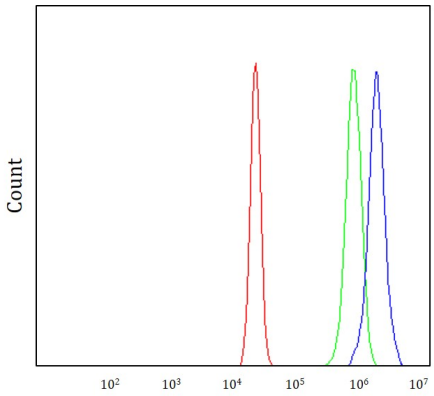
ARG44064 anti-SIX4 antibody ICC/IF image

Immunofluorescence: U2OS stained with ARG44064 anti-SIX4 antibody at 5 µg/mL dilution.



ARG44064 anti-SIX4 antibody WB image

Western blot: RT4 and U20S stained with ARG44064 anti-SIX4 antibody at 0.5 µg/mL dilution.



ARG44064 anti-SIX4 antibody FACS image

Flow Cytometry: U2OS stained with ARG44064 anti-SIX4 antibody at 1 µg/1x10^6 cells dilution.