ARX Antibody – Mouse Monoclonal

PRODUCT OVERVIEW

Product Name	ARX, Monoclonal Antibody
Full Product Name	ARX (aristaless Related Homeobox, ISSX, MRX29, MRX32, MRX33, MRX36, MRX38, MRX43, MRX54, MRX76, MRX87, MRXS1, PRTS) (PE)
Product Gene Name	anti-ARX antibody
Product Synonym Names	aristaless Related Homeobox; ISSX; MRX29; MRX32; MRX33; MRX36; MRX38; MRX43; MRX54; MRX76; MRX87; MRXS1; PRTS
Clonality	Monoclonal
Isotype	IgG2b,k
Clone Number	2C7
Host	Mouse
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with R-Phycoerythrin (PE).
Purity/Purification	Purified
Specificity	Recognizes ARX.
Preparation and Storage	Store product at 4 degree C in the dark. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. Caution: PE conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Molecular Weight	58kDa
OMIM	300004
3D Structure	ModBase 3D Structure for Q96QS3
Immunogen	ARX (NP_620689, 1aa-95aa) partial recombinant protein with GST tag. MW of the GST tag alone is 26kD.
Immunogen Sequence	MSNQYQEEGCSERPECKSKSPTLLSSYCIDSILGRRSPCKMRLLGAAQSLPAPLTSRADPEKAVQGSPKSSSAPFEAELHLPPKLRRLYGPGGGR
Conjugate	PE
Product Categories/Family for anti-ARX antibody	Antibodies; Transcription Factors; Homeobox (HOX)
Applications Tested/Suitable for anti-ARX antibody	ELISA (EIA)
Application Notes for anti-ARX antibody	Applications are based on unconjugated antibody.
Related Product Information for anti-ARX antibody	This gene is a homeobox-containing gene expressed during development. The expressed protein contains two conserved domains, a C-peptide (or aristaless domain) and the prd-like class homeobox domain. It is a member of the group-II aristaless-related protein family whose members are expressed primarily in the central and/or peripheral nervous system. This gene is thought to be involved in CNS development. Mutations in this gene cause X-linked mental retardation and epilepsy. [provided by RefSeq]

Other Notes	Small volumes of anti-ARX antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for ARX purchase	MBS6185566 is an antibody targeting ARX. Also known as ARX (aristaless Related Homeobox, ISSX, MRX29, MRX32, MRX33, MRX36, MRX38, MRX43, MRX54, MRX76, MRX87, MRXS1, PRTS) (PE). Host: Mouse.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for ARX. It may not necessarily be applicable to this product.

NCBI GI #	24497589
NCBI GeneID	170302
NCBI Accession #	NP_620689
UniProt Primary Accession #	Q96QS3
UniProt Related Accession #	Q96QS3
GenBank Nucleotide #	NM_139058
NCBI Official Full Name	homeobox protein ARX
NCBI Official Synonym Full Names	aristaless related homeobox
NCBI Official Symbol	ARX
NCBI Official Synonym Symbols	ISSX; PRTS; CT121; EIEE1; MRX29; MRX32; MRX33; MRX36; MRX38; MRX43; MRX54; MRX76; MRX87; MRXS1
UniProt Protein Name	Homeobox protein ARX
UniProt Synonym Protein Names	Aristaless-related homeobox
Protein Family	Aristaless-related homeobox protein
UniProt Gene Name	ARX
UniProt Entry Name	ARX_HUMAN
NCBI Protein Information	homeobox protein ARX
NCBI Summary for ARX	This gene is a homeobox-containing gene expressed during development. The expressed protein contains two conserved domains, a C-peptide (or aristaless domain) and the prd-like class homeobox domain. It is a member of the group-II aristaless-related protein family whose members are expressed primarily in the central and/or peripheral nervous system. This gene is thought to be involved in CNS development. Expansion of a polyalanine tract and other mutations in this gene cause X-linked cognitive disability and epilepsy. [provided by RefSeq, Jul 2016]

UniProt Comments for ARX	ARX: Transcription factor required for normal brain development. May be important for maintenance of specific neuronal subtypes in the cerebral cortex and axonal guidance in the floor plate. Defects in ARX are the cause of lissencephaly X-linked type 2 (LISX2); also known as lissencephaly X-linked with ambiguous genitalia (XLAG). LISX2 is a classic type lissencephaly associated with abnormal genitalia. LISX2 patients have severe congenital or postnatal microcephaly, lissencephaly, agenesis of the corpus callosum, neonatal-onset intractable epilepsy, poor temperature regulation, chronic diarrhea, and ambiguous or underdeveloped genitalia. Defects in ARX are the cause of epileptic encephalopathy early infantile type 1 (EIEE1); also known as myoclonic epilepsy X-linked with intellectual disability and spasticity, X-linked West syndrome or X-linked infantile spasm syndrome (ISSX). EIEE1 is a severe form of epilepsy characterized by frequent tonic seizures or spasms beginning in infancy with a specific EEG finding of suppression-burst patterns, characterized by high-voltage bursts alternating with almost flat suppression phases. Patients may progress to West syndrome, which is characterized by tonic spasms with clustering, arrest of psychomotor development, and hypsarrhythmia on EEG. Defects in ARX are a cause of Partington syndrome (PRTS); also known as X-linked syndromic mental retardation 1 (MRXS1). PRTS is characterized by mental retardation, episodic dystonic hand movements, and dysarthria. Defects in ARX are the cause of mental retardation X- linked ARX-related (MRXARX). Mental retardation is a mental disorder characterized by significantly sub-average general intellectual functioning associated with impairments in adaptative behavior and manifested during the developmental period. Defects in ARX are the cause of agenesis of the corpus callosum with abnormal genitalia (ACCAG). A X-linked syndrome with variable expression in females. It is characterized by agenesis of corpus callosum, mental retardation and seizures. Manifestations in surviving males include severe acquired micrencephaly, mental retardation, limb contractures, scoliosis, tapered fingers with hyperconvex nails, a characteristic face with large eyes, prominent supraorbital ridges, synophrys, optic atrophy, broad alveolar ridges, and seizures. Urologic anomalies include renal dysplasia, cryptorchidism, and hypospadias. Belongs to the paired homeobox family. Bicoid subfamily. Protein type: Cancer Testis Antigen (CTA); DNA-binding Chromosomal Location of Human Ortholog: Xp21.3 Cellular Component: nucleus Molecular Function: chromatin binding Biological Process: embryonic olfactory bulb interneuron precursor migration; axon guidance; transcription, DNA-dependent; cerebral cortex GABAergic interneuron migration; cerebral cortex tangential migration; cell proliferation in forebrain; globus pallidus development; negative regulation of transcription from RNA polymerase II promoter; positive regulation of organ growth; lipid digestion; regulation of cell proliferation Disease: Lissencephaly, X-linked, 2; Mental Retardation, X-linked, With Or Without Seizures, Arx-related; Corpus Callosum, Agenesis Of, With Abnormal Genitalia; Epileptic Encephalopathy, Early Infantile, 1; Partington X-linked Mental Retardation Syndrome
Research Articles on ARX	**1.** although ARX expression strongly decreases towards the end of gestation, it is still present after birth in some neurons of the basal ganglia, thalamus and cerebral cortex
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