DMRT1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	DMRT1, Polyclonal Antibody
Full Product Name	DMRT1, CT (DMRT1, DMT1, Doublesex-and mab-3-related transcription factor 1, DM domain expressed in testis protein 1) (MaxLight 750)
Product Gene Name	anti-DMRT1 antibody
Product Synonym Names	DMRT1; DMT1; Doublesex-and mab-3-related transcription factor 1; DM domain expressed in testis protein 1
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with MaxLight750.
Purity/Purification	Purified by Protein A Affinity Chromatography.
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: MaxLight750 conjugates are sensitive to light. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Molecular Weight	18,325 Da
OMIM	154230
3D Structure	ModBase 3D Structure for Q9Y5R6
Immunogen	DMRT1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 295-322 amino acids from the C-terminal region of human DMRT1.
Conjugate	MaxLight750
Note	Preservative Free
Product Categories/Family for anti-DMRT1 antibody	Antibodies; Transcription Factors
Applications Tested/Suitable for anti-DMRT1 antibody	Western Blot (WB), FLISA
Application Notes for anti-DMRT1 antibody	WB: 1:100-500 FLISA: 1:1,000 Applications are based on unconjugated antibody.
Related Product Information for anti-DMRT1 antibody	This gene is found in a cluster with two other members of the gene family, having in common a zinc finger-like DNA-binding motif (DM domain). The DM domain is an ancient, conserved component of the vertebrate sex-determining pathway that is also a key regulator of male development in flies and nematodes. This gene exhibits a gonad-specific and sexually dimorphic expression pattern. Defective testicular development and XY feminization occur when this gene is hemizygous.
Product References and Citations for anti-DMRT1 antibody	Kang, J.U., et al. Int. J. Oncol. 37(2):327-335(2010). Turnbull, C., et al. Nat. Genet. 42(7):604-607(2010). Rose, J.E., et al. Mol. Med. 16 (7-8), 247-253 (2010): Krentz, A.D., et al. Proc. Natl. Acad. Sci. U.S.A. 106(52):22323-22328(2009). Cheng, H.H., et al. Cell Res. 16(4):389-393(2006).

Other Notes	Small volumes of anti-DMRT1 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 DMRT1 purchase	MBS6292474 is an antibody targeting DMRT1. Also known as DMRT1, CT (DMRT1, DMT1, Doublesex-and mab-3-related transcription factor 1, DM domain expressed in testis protein 1) (MaxLight 750). Reactive in Human. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for DMRT1. It may not necessarily be applicable to this product.

NCBI GI #	62241026
NCBI GeneID	1761
NCBI Accession #	NP_068770.2
UniProt Primary Accession #	Q9Y5R6
UniProt Secondary Accession #	Q6T1H8; Q6T1H9; Q8IW77; B2R913
UniProt Related Accession #	Q9Y5R6
GenBank Nucleotide #	NM_021951.2
NCBI Official Full Name	doublesex- and mab-3-related transcription factor 1
NCBI Official Synonym Full Names	doublesex and mab-3 related transcription factor 1
NCBI Official Symbol	DMRT1
NCBI Official Synonym Symbols	DMT1; CT154
UniProt Protein Name	Doublesex- and mab-3-related transcription factor 1
UniProt Synonym Protein Names	DM domain expressed in testis protein 1
Protein Family	Doublesex and mab-3 related transcription factor
UniProt Gene Name	DMRT1
UniProt Synonym Gene Names	DMT1
UniProt Entry Name	DMRT1_HUMAN
NCBI Protein Information	doublesex- and mab-3-related transcription factor 1

UniProt Comments for DMRT1	DMRT1: Transcription factor that plays a key role in male sex determination and differentiation by controlling testis development and male germ cell proliferation. Plays a central role in spermatogonia by inhibiting meiosis in undifferentiated spermatogonia and promoting mitosis, leading to spermatogonial development and allowing abundant and continuous production of sperm. Acts both as a transcription repressor and activator: prevents meiosis by restricting retinoic acid (RA)-dependent transcription and repressing STRA8 expression and promotes spermatogonial development by activating spermatogonial differentiation genes, such as SOHLH1. Also plays a key role in postnatal sex maintenance by maintaining testis determination and preventing feminization: represses transcription of female promoting genes such as FOXL2 and activates male-specific genes. May act as a tumor suppressor. May also play a minor role in oogenesis. Defects in DMRT1 may be a cause of testicular germ cell tumor (TGCT). A common solid malignancy in males. Germ cell tumors of the testis constitute 95% of all testicular neoplasms. Defects in DMRT1 may be a cause of 46,XY sex reversal type 4 (SRXY4). A condition characterized by male-to- female sex reversal in the presence of a normal 46,XY karyotype. Patients display complete or partial gonadal dysgenesis and a chromosome 9p deletion. Belongs to the DMRT family. 3 isoforms of the human protein are produced by alternative splicing. Protein type: DNA-binding Chromosomal Location of Human Ortholog: 9p24.3 Cellular Component: cytoplasm; nucleus Molecular Function: chromatin binding; metal ion binding; protein heterodimerization activity; protein homodimerization activity; transcription factor activity Biological Process: cell morphogenesis; germ cell migration; male sex determination; male sex differentiation; negative regulation of meiosis; negative regulation of transcription from RNA polymerase II promoter; oocyte development; positive regulation of mitosis; positive regulation of transcription from RNA polymerase II promoter; Sertoli cell development; Sertoli cell differentiation; sex differentiation; spermatogenesis; transcription from RNA polymerase II promoter
Research Articles on DMRT1	**1.** The role of DMT1 in mitochondrial iron acquisition by immunofluorescence with mitochondrial markers in cells and isolated mitochondria, as well as flow cytometric quantification of DMT1-positive mitochondria from an inducible expression system.
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