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BRDT Antibody

Rabbit Anti Human Polyclonal Antibody
Catalog # ABV11696

Product Information

Application	WB
Primary Accession	Q58F21
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	107954

Additional Information

Gene ID	676
Positive Control	Western blot: Recombinant protein
Application & Usage	Western blot: ~1:200
Other Names	BrdT, Cancer/testis antigen 9, CT9, RING3-like protein
Target/Specificity	BRDT
Antibody Form	Liquid
Appearance	Colorless liquid
Formulation	30 □g (0.5 mg/ml) of antibody in PBS pH 7.2 containing 0.01 % BSA, 0.01 % thimerosal, and 50 % glycerol.
Handling	The antibody solution should be gently mixed before use.
Reconstitution & Storage	-20 °C
Background Descriptions	
Precautions	BRDT Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	BRDT
Function	Testis-specific chromatin protein that specifically binds histone H4 acetylated at 'Lys-5' and 'Lys-8' (H4K5ac and H4K8ac, respectively) and plays a key role in spermatogenesis (PubMed:22464331, PubMed:22901802). Required in late pachytene spermatocytes: plays a role in meiotic and

	post-meiotic cells by binding to acetylated histones at the promoter of specific meiotic and post-meiotic genes, facilitating their activation at the appropriate time (PubMed:22901802). In the post-meiotic phase of spermatogenesis, binds to hyperacetylated histones and participates in their general removal from DNA (PubMed:22901802). Also recognizes and binds a subset of butyrylated histones: able to bind histone H4 butyrylated at 'Lys-8' (H4K8ac), while it is not able to bind H4 butyrylated at 'Lys-5' (H4K5ac) (By similarity). Also acts as a component of the splicing machinery in pachytene spermatocytes and round spermatids and participates in 3'-UTR truncation of specific mRNAs in post-meiotic spermatids (By similarity). Required for chromocenter organization, a structure comprised of peri-centromeric heterochromatin.
Cellular Location	Nucleus. Note=Detected on chromatin {ECO:0000250|UniProtKB:Q91Y44}
Tissue Location	Testis-specific. A 3-fold higher expression is seen in adult testis than in embryo testis. Expression seems to be correlated with histone H4 hyperacetylation during the haploid phase of spermatogenesis (spermiogenesis). No expression, or very low expression is seen in patients' testes with abnormal spermatogenesis. Expressed in cancers such as non-small cell lung cancer and squamous cell carcinomas of the head and neck as well as of esophagus, but not in melanoma or in cancers of the colon, breast, kidney and bladder

Background

BrdT is similar to the RING3 protein family. It possesses 2 bromodomain motifs and a PEST sequence. The bromodomain is found in proteins that regulate transcription. BrdT drives a meiotic and post-meiotic gene expression program. It also controls the genome-wide post-meiotic genome reorganization that occurs after histone hyperacetylation in elongating spermatids. It may play a role in the transcriptional regulation of spermatogenesis. It also seems to have a structural ATP-independent role in the reorganization of acetylated chromatin.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.