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BRDT Antibody
Rabbit Polyclonal Antibody
Catalog # ABV11199

Specification

BRDT Antibody - Product Information

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

BRDT Antibody - 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
100 µg or 30 µg (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.

BRDT Antibody - 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

BRDT Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

BRDT Antibody - Images

BRDT Antibody - 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.