


Anti-ATM antibody [2C1 (1A1)] - BSA and Azide free ab78

★★★★★ [10 Abreviews](#) [108 References](#) [画像数 7](#)

製品の概要

製品名	Anti-ATM antibody [2C1 (1A1)] - BSA and Azide free
製品の詳細	Mouse monoclonal [2C1 (1A1)] to ATM - BSA and Azide free
由来種	Mouse
特異性	The ATM antibody, clone 2C1, recognizes full-length ATM.
アプリケーション	適用あり: Flow Cyt, IHC-P, WB, IP
種交差性	交差種: Human 交差が予測される動物種: Mouse, Rat, Monkey 
免疫原	Recombinant fragment within ATM aa 2550-3100. The exact immunogen sequence used to generate this antibody is proprietary information. If additional detail on the immunogen is needed to determine the suitability of the antibody for your needs, please contact our Scientific Support team to discuss your requirements. Database link: Q13315
ポジティブ・コントロール	WB: HeLa nuclear extract, lymphoblastoid nuclear lysate. IHC-P: Human Testis sections, human colonic mucosa, human kidney sections. ICC/IF: Human U2OS cells Flow: HeLa cells
特記事項	<p>This product was changed from ascites to tissue culture supernatant on 23rd October 2018. Please note that the dilutions may need to be adjusted accordingly. If you have any questions, please do not hesitate to contact our scientific support team</p> <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As</p>

製品の特性

製品の状態	Liquid
保存方法	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
バッファー	pH: 7.40

	Constituent: 100% PBS
キャリア・フリー	はい
特記事項 (精製)	Purified from TCS by Protein G chromatography to at least 95% homogeneity as determined by SDS-PAGE.
ポリモノ	モノクローナル
クローン名	2C1 (1A1)
ミエローマ	NS1
アイソタイプ	IgG1
軽鎖の種類	kappa

アプリケーション

The Abpromise guarantee **Abpromise保証は、次のテスト済みアプリケーションにおけるab78の使用に適用されます**
 アプリケーションノートには、推奨の開始希釈率がありますが、適切な希釈率につきましてはご確認ください。

アプリケーション	Abreviews	特記事項
Flow Cyt		Use 1-2µg for 10 ⁶ cells. ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.
IHC-P	★★★★★ (1)	Use a concentration of 5 µg/ml.
WB	★★★★★ (7)	1/500 - 1/3000. Detects a band of approximately 350 kDa (predicted molecular weight: 350 kDa).
IP		Use a concentration of 1 - 10 µg/ml.

ターゲット情報

機能	Serine/threonine protein kinase which activates checkpoint signaling upon double strand breaks (DSBs), apoptosis and genotoxic stresses such as ionizing ultraviolet A light (UVA), thereby acting as a DNA damage sensor. Recognizes the substrate consensus sequence [ST]-Q. Phosphorylates 'Ser-139' of histone variant H2AX/H2AFX at double strand breaks (DSBs), thereby regulating DNA damage response mechanism. Also plays a role in pre-B cell allelic exclusion, a process leading to expression of a single immunoglobulin heavy chain allele to enforce clonality and monospecific recognition by the B-cell antigen receptor (BCR) expressed on individual B lymphocytes. After the introduction of DNA breaks by the RAG complex on one immunoglobulin allele, acts by mediating a repositioning of the second allele to pericentromeric heterochromatin, preventing accessibility to the RAG complex and recombination of the second allele. Also involved in signal transduction and cell cycle control. May function as a tumor suppressor. Necessary for activation of ABL1 and SAPK. Phosphorylates p53/TP53, FANCD2, NFKBIA, BRCA1, CTIP, nibrin (NBN), TERF1, RAD9 and DCLRE1C. May play a role in vesicle and/or protein transport. Could play a role in T-cell development, gonad and neurological function. Plays a role in replication-dependent histone mRNA degradation. Binds DNA ends.
組織特異性	Found in pancreas, kidney, skeletal muscle, liver, lung, placenta, brain, heart, spleen, thymus, testis, ovary, small intestine, colon and leukocytes.

関連疾患

Defects in ATM are the cause of ataxia telangiectasia (AT) [MIM:208900]; also known as Louis-Bar syndrome, which includes four complementation groups: A, C, D and E. This rare recessive disorder is characterized by progressive cerebellar ataxia, dilation of the blood vessels in the conjunctiva and eyeballs, immunodeficiency, growth retardation and sexual immaturity. AT patients have a strong predisposition to cancer; about 30% of patients develop tumors, particularly lymphomas and leukemias. Cells from affected individuals are highly sensitive to damage by ionizing radiation and resistant to inhibition of DNA synthesis following irradiation. Note=Defects in ATM contribute to T-cell acute lymphoblastic leukemia (TALL) and T-prolymphocytic leukemia (TPLL). TPLL is characterized by a high white blood cell count, with a predominance of prolymphocytes, marked splenomegaly, lymphadenopathy, skin lesions and serous effusion. The clinical course is highly aggressive, with poor response to chemotherapy and short survival time. TPLL occurs both in adults as a sporadic disease and in younger AT patients. Note=Defects in ATM contribute to B-cell non-Hodgkin lymphomas (BNHL), including mantle cell lymphoma (MCL).

Note=Defects in ATM contribute to B-cell chronic lymphocytic leukemia (BCLL). BCLL is the commonest form of leukemia in the elderly. It is characterized by the accumulation of mature CD5+ B lymphocytes, lymphadenopathy, immunodeficiency and bone marrow failure.

配列類似性

Belongs to the PI3/P4-kinase family. ATM subfamily.

Contains 1 FAT domain.

Contains 1 FATC domain.

Contains 1 PI3K/PI4K domain.

ドメイン

The FATC domain is required for interaction with KAT5.

翻訳後修飾

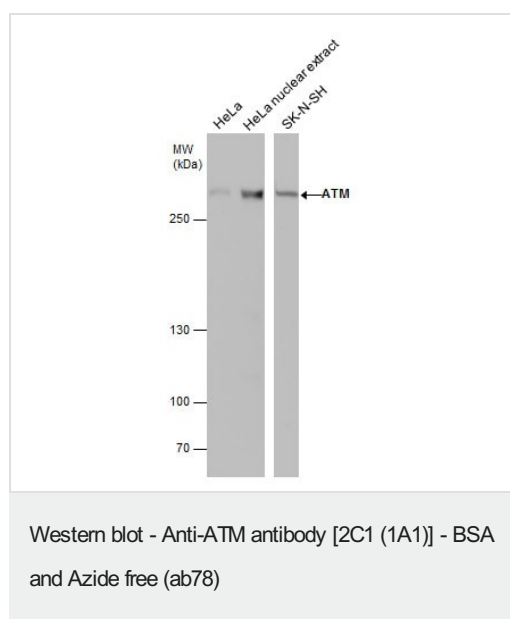
Phosphorylated by NUA1/ARK5. Autophosphorylation on Ser-367, Ser-1893, Ser-1981 correlates with DNA damage-mediated activation of the kinase.

Acetylation, on DNA damage, is required for activation of the kinase activity, dimer-monomer transition, and subsequent autophosphorylation on Ser-1981. Acetylated in vitro by KAT5/TIP60.

細胞内局在

Nucleus. Cytoplasmic vesicle. Primarily nuclear. Found also in endocytic vesicles in association with beta-adaptin.

画像



All lanes : Anti-ATM antibody [2C1 (1A1)] - BSA and Azide free (ab78) at 1/500 dilution

Lane 1 : 30ug HeLa

Lane 2 : 30ug HeLa nuclear extract

Lane 3 : 30ug SK-N-SH

Secondary

All lanes : Mouse IgG antibody (HRP) at 1/5000 dilution

Predicted band size: 350 kDa

5% SDS-PAGE.

Running conditions: 80V, 15min; 140V, 40 minutes.

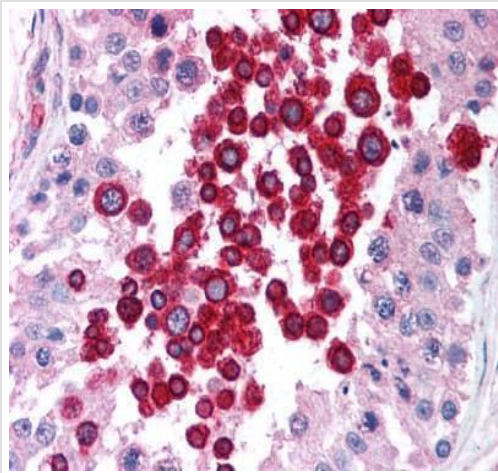
Transfer condition: Semi-dry, 18 V, 60 min (NC membrane).

Blocking condition: 5% non-fat milk in TBST, RT, 60 minutes.

Primary antibody incubation: 4°C, overnight.

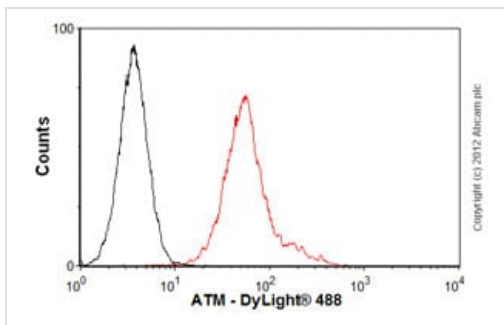
Washing condition: 5 ml TBST, 4 x 5 minutes.

Exposure: enhanced ECL



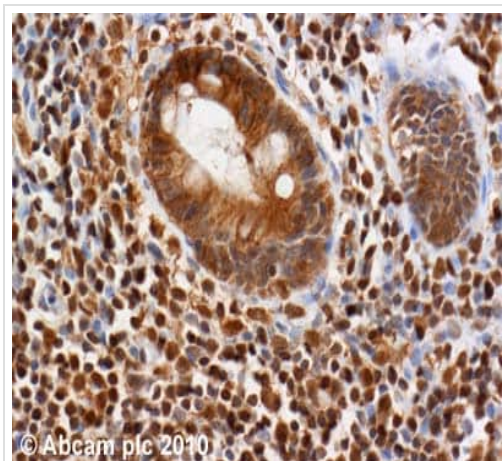
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ATM antibody [2C1 (1A1)] - BSA and Azide free (ab78)

ab78 staining ATM in Human Testis sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Samples were incubated with primary antibody (5ug/ml) and a Biotin-conjugated rabbit anti-mouse IgG was used as the secondary antibody.



Flow Cytometry - Anti-ATM antibody [2C1 (1A1)] - BSA and Azide free (ab78)

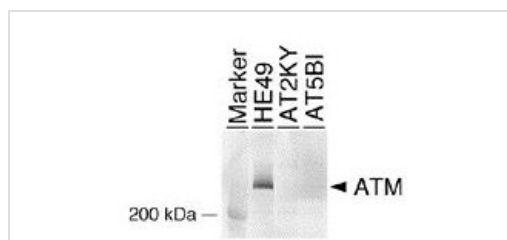
Overlay histogram showing HeLa cells stained with **ab78** (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab78, 1µg/1x10⁶ cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (**ab96879**) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (**ab91353**, 2µg/1x10⁶ cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in HeLa cells fixed with 4% paraformaldehyde (10 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ATM antibody [2C1 (1A1)] - BSA and Azide free (ab78)

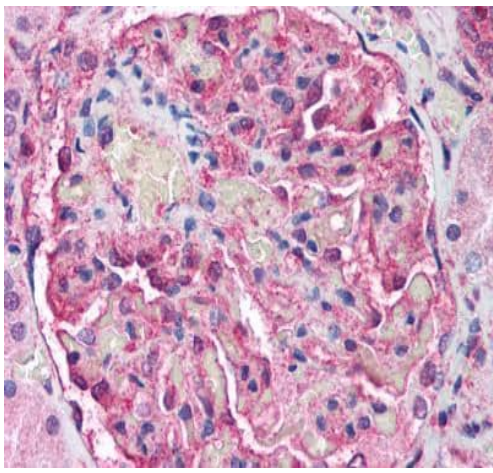
ab78 (2µg/ml) staining ATM in human colonic mucosa, using an automated system (DAKO Autostainer Plus). Using this protocol there is strong nuclear staining of mucosal epithelium and lymphocytes.

Sections were rehydrated and antigen retrieved with the Dako 3 in 1 AR buffer EDTA pH 9.0 in a DAKO PT link. Slides were peroxidase blocked in 3% H₂O₂ in methanol for 10 mins. They were then blocked with Dako Protein block for 10 minutes (containing casein 0.25% in PBS) then incubated with primary antibody for 20 min and detected with Dako envision flex amplification kit for 30 minutes. Colorimetric detection was completed with Diaminobenzidine for 5 minutes. Slides were counterstained with Haematoxylin and coverslipped under DePeX. Please note that, for manual staining, optimization of primary antibody concentration and incubation time is recommended. Signal amplification may be required.



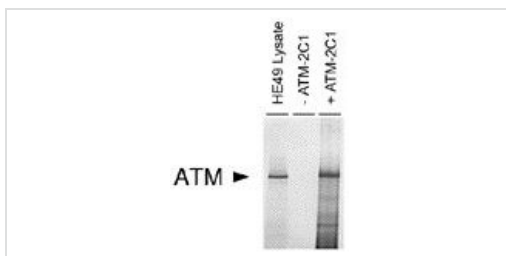
Western blot - Anti-ATM antibody [2C1 (1A1)] - BSA and Azide free (ab78)

Detection of human ATM protein using anti-ATM 2C1 monoclonal antibody (ab78) by western blot.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ATM antibody [2C1 (1A1)] - BSA and Azide free (ab78)

ab78 staining ATM in Human Kidney sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Samples were incubated with primary antibody (5ug/ml) and a Biotin-conjugated rabbit anti-mouse IgG was used as the secondary antibody.



Immunoprecipitation - Anti-ATM antibody [2C1 (1A1)] - BSA and Azide free (ab78)

Detection of human ATM protein using anti-ATM 2C1 monoclonal antibody (**ab78**) by immunoprecipitation.

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.co.jp/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors