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SPDYA Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP9978a

Product Information

Application	IHC-P, FC, WB, E
Primary Accession	Q5MJ70
Other Accession	Q8R496, Q5IBH7
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB24658
Calculated MW	36463
Antigen Region	147-175

Additional Information

Gene ID	245711
Other Names	Speedy protein A, Rapid inducer of G2/M progression in oocytes A, RINGO A, hSpy/Ringo A, Speedy-1, Spy1, SPDYA (HGNC:30613)
Target/Specificity	This SPDYA antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 147-175 amino acids from the Central region of human SPDYA.
Dilution	IHC-P~~1:100~500 FC~~1:10~50 WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	SPDYA Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SPDYA (HGNC:30613)
Function	Regulates the G1/S phase transition of the cell cycle by binding and

activating CDK1 and CDK2 (PubMed:12972555). Contributes to CDK2 activation without promoting CDK2 phosphorylation, by inducing a conformation change of the CDK2 T-loop that obstructs the substrate- binding cleft prior to kinase activation (PubMed:28666995). Mediates cell survival during the DNA damage process through activation of CDK2 (PubMed:12839962).

Cellular Location Nucleus

Tissue Location Highly expressed in testis. Expressed at a low level in wide range of tissues including bone marrow, brain, heart, kidney, colon, liver, placenta, spleen, skeletal muscle, salivary gland, thyroid gland, thymus, trachea and uterus. Expressed at a slightly higher level in adrenal gland, cerebellum, small intestine, lung, prostate and trachea. Expression is cell cycle-dependent, being restricted to cells in G1/S phase.

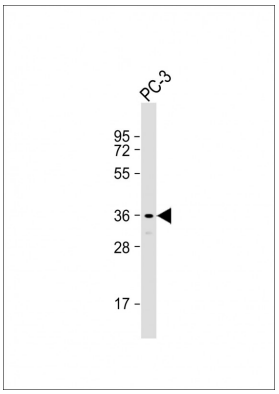
Background

SPDYA (speedy homolog A (Drosophila)) regulates the G1/S phase transition of the cell cycle by binding and activating CDC2, CDK2 and CDKN1B/KIP1. SPDYA can activate CDK2 without promoting CDK2 phosphorylation. SPDYA mediates cell survival during the DNA damage process through activation of CDK2.

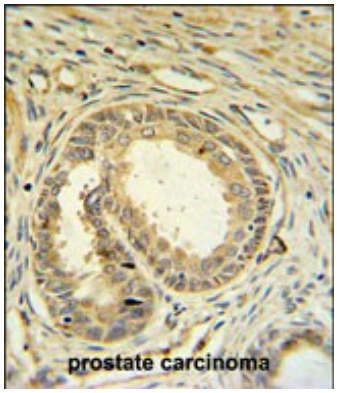
References

Ke, Q., et al. Exp. Mol. Pathol. 87(3):167-172(2009)
Dinarina, A., et al. FEBS Lett. 583(17):2772-2778(2009)
McAndrew, C.W., et al. Cell Cycle 8(1):66-75(2009)

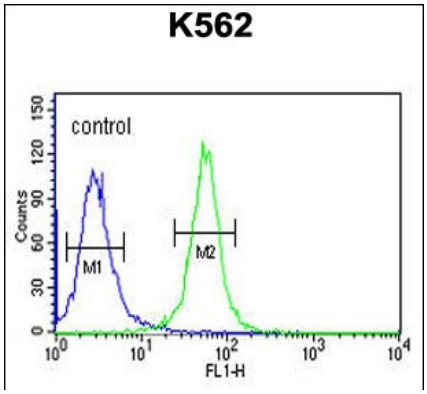
Images



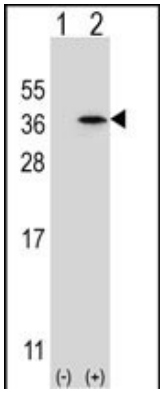
Anti-SPDYA Antibody (Center) at 1:1000 dilution + PC-3 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 36 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



SPDYA Antibody (Center) (Cat. #AP9978a) IHC analysis in formalin fixed and paraffin embedded prostate carcinoma followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the SPDYA Antibody (Center) for immunohistochemistry. Clinical relevance has not been evaluated.



SPDYA Antibody (Center) (Cat. #AP9978a) flow cytometric analysis of K562 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.



Western blot analysis of SPDYA (arrow) using rabbit polyclonal SPDYA Antibody (Center) (Cat. #AP9978a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the SPDYA gene.

Citations

- Temporal-spatial expressions of Spy1 in rat sciatic nerve after crush.

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