SANTA CRUZ BIOTECHNOLOGY, INC.

PHAX (F-1): sc-398147

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Assembly of spliceosomal U snRNPs requires nuclear export of U snRNA precursors. PHAX (phosphorylated adaptor for RNA export, also designated resiniferatoxin-binding protein RBP-26) is the additional factor required for U snRNA export complex assembly *in vitro*. PHAX is present in sensory neuron cell bodies. *In vivo,* PHAX is required for U snRNA export but not for CRM1-mediated export in general. PHAX acts an adaptor between the CBC/RNA complex and the CRM1/RanGTP proteins. PHAX is phosphorylated in the nucleus and then exported with RNA to the cytoplasm, where it is dephosphorylated. PHAX phosphorylation is essential for export complex assembly and its dephosphorylation causes export complex disassembly.

REFERENCES

1. Ninkina, N.N., et al. 1994. Molecular cloning of a resiniferatoxin-binding protein. Brain Res. Mol. Brain Res. 22: 39-48.
2. Fischer, U., et al. 1995. The HIV-1 Rev activation domain is a nuclear export signal that accesses an export pathway used by specific cellular RNAs. Cell 82: 475-483.
3. Fornerod, M., et al. 1997. CRM1 is an export receptor for leucine-rich nuclear export signals. Cell 90: 1051-1060.
4. Izaurralde, E., et al. 1997. The asymmetric distribution of the constituents of the Ran system is essential for transport into and out of the nucleus. EMBO J. 16: 6535-6547.
5. Ohno, M., et al. 2000. PHAX, a mediator of U snRNA nuclear export whose activity is regulated by phosphorylation. Cell 101: 187-198.

CHROMOSOMAL LOCATION

Genetic locus: PHAX (human) mapping to 5q23.2.

SOURCE

PHAX (F-1) is a mouse monoclonal antibody raised against amino acids 115-189 mapping within an internal region of PHAX of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PHAX (F-1) is available conjugated to agarose (sc-398147 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398147 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398147 PE), fluorescein (sc-398147 FITC), Alexa Fluor® 488 (sc-398147 AF488), Alexa Fluor® 546 (sc-398147 AF546), Alexa Fluor® 594 (sc-398147 AF594) or Alexa Fluor® 647 (sc-398147 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398147 AF680) or Alexa Fluor® 790 (sc-398147 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

PHAX (F-1) is recommended for detection of PHAX of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PHAX siRNA (h): sc-106785, PHAX shRNA Plasmid (h): sc-106785-SH and PHAX shRNA (h) Lentiviral Particles: sc-106785-V.

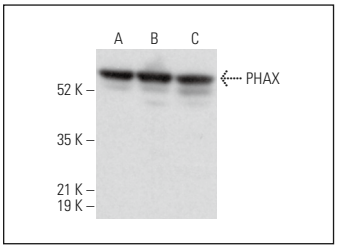
Molecular Weight of PHAX: 44 kDa.

Positive Controls: SK-BR-3 cell lysate: sc-2218, Y79 cell lysate: sc-2240 or HeLa whole cell lysate: sc-2200.

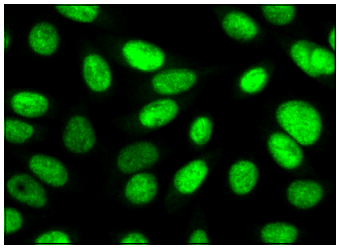
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



PHAX (F-1): sc-398147. Western blot analysis of PHAX expression in Y79 (**A**), HeLa (**B**) and SK-BR-3 (**C**) whole cell lysates.



PHAX (F-1): sc-398147. Immunofluorescence staining of formalin-fixed SW480 cells showing nuclear localization.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.