

MAK (C-24): sc-130165

BACKGROUND

The phosphorylation and dephosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions in eukaryotes, including cell division, homeostasis and apoptosis. A group of proteins that are intimately involved in this process are the serine/threonine (Ser/Thr) protein kinases. MAK (male germ cell-associated kinase) is a 623 amino acid member of the Ser/Thr protein kinase family. Expressed predominantly in testicular germ cells, MAK contains one protein kinase domain and is believed to play an important role in spermatogenesis, as it is involved in the regulation of cell cycle and cell fate. MAK is a homolog of the *S. cerevisiae* protein Ime2, a meiosis-specific protein kinase that is required for the initiation of meiosis and spore formation. MAK expression is induced by androgen and MAK physically associates with AR (androgen receptor), functioning as a co-activator. The knockdown of MAK expression results in diminished expression of AR-responsive genes and inhibition of androgen-induced growth.

REFERENCES

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5. Miyata, Y. and Nishida, E. 2004. CK2 controls multiple protein kinases by phosphorylating a kinase-targeting molecular chaperone, Cdc37. *Mol. Cell. Biol.* 24: 4065-4074.
6. Jia, L. and Coetzee, G.A. 2005. Androgen receptor-dependent PSA expression in androgen-independent prostate cancer cells does not involve androgen receptor occupancy of the PSA locus. *Cancer Res.* 65: 8003-8008.
7. Fu, Z., et al. 2005. Activation of a nuclear Cdc2-related kinase within a mitogen-activated protein kinase-like TDY motif by autophosphorylation and cyclin-dependent protein kinase-activating kinase. *Mol. Cell. Biol.* 25: 6047-6064.
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CHROMOSOMAL LOCATION

Genetic locus: MAK (human) mapping to 6p24.2; Mak (mouse) mapping to 13 A3.3.

RESEARCH USE

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

SOURCE

MAK (C-24) is a purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of MAK of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

MAK (C-24) is recommended for detection of MAK of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 MAK siRNA (h): sc-95387, MAK siRNA (m): sc-149234, MAK shRNA Plasmid (h): sc-95387-SH, MAK shRNA Plasmid (m): sc-149234-SH, MAK shRNA (h) Lentiviral Particles: sc-95387-V and MAK shRNA (m) Lentiviral Particles: sc-149234-V.

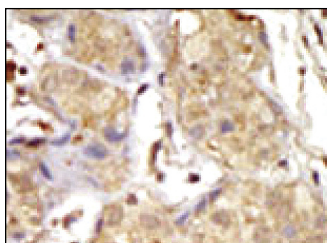
Molecular Weight of MAK: 71 kDa.

Positive Controls: HeLa nuclear extract: sc-2120.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



MAK (C-24): sc-130165. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cancer tissue showing cytoplasmic staining.

STORAGE

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