

# karyopherin $\alpha$ 5 (D-19): sc-68194

## BACKGROUND

Protein transport across the nucleus is a selective, multi-step process involving several cytoplasmic factors that mediate protein passage through the nuclear pore complex (NPC). Cytoplasmic proteins that contain nuclear localization signals (NLSs) must be recognized as import substrates, dock at the nuclear pore complex and translocate across the nuclear envelope in an ATP-dependent fashion. karyopherin  $\alpha$ 5, also known as SRP6 or IPOA6, is a 536 amino acid protein that contains ten ARM repeats and one IBB domain and belongs to the importin  $\alpha$  family. Expressed specifically in the testis, karyopherin  $\alpha$ 5 binds to proteins containing an NLS motif and directs them to the NPC for transport into the nucleus. Specifically, karyopherin  $\alpha$ 5 is thought to bind nuclear-targeted proteins through its IBB domain, which acts as an intrasteric autoregulatory sequence that interacts with the target NLS domain. Due to its ability to direct proteins to the NPC for import, karyopherin  $\alpha$ 5 may be involved in the nuclear localization of HIV-1 and may, thus, be involved in the pathogenesis of the disease.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: KPNA5 (human) mapping to 6q22.1.

## SOURCE

karyopherin  $\alpha$ 5 (D-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of karyopherin  $\alpha$ 5 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-68194 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

karyopherin  $\alpha$ 5 (D-19) is recommended for detection of karyopherin  $\alpha$ 5 of human and rat 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

karyopherin  $\alpha$ 5 (D-19) is also recommended for detection of karyopherin  $\alpha$ 5 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for karyopherin  $\alpha$ 5 siRNA (h): sc-62523, karyopherin  $\alpha$ 5 shRNA Plasmid (h): sc-62523-SH and karyopherin  $\alpha$ 5 shRNA (h) Lentiviral Particles: sc-62523-V.

Molecular Weight of karyopherin  $\alpha$ 5: 60 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## STORAGE

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

## RESEARCH USE

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

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Try **karyopherin  $\alpha$ 5 (1D2): sc-517105**, our highly recommended monoclonal alternative to karyopherin  $\alpha$ 5 (D-19).