

## VPRBP (K-20): sc-82419

### BACKGROUND

Infection by human immunodeficiency virus (HIV) is associated with an early immune dysfunction and progressive destruction of CD4<sup>+</sup>T lymphocytes. The HIV-induced, premature destruction of lymphocytes is associated with the continuous production of HIV viral proteins, which modulate apoptotic pathways. The virion-associated protein (Vpr), an accessory protein of HIV, affects viral replication, as well as cell growth, differentiation and apoptosis. Involved in the pathogenesis of T cell depletion in HIV-infected people, Vpr has been shown to enhance the nuclear transport of the HIV-1 pre-integration complex, activate transcription of cellular and viral promoters and arrest the cell cycle at the G<sub>2</sub>/M checkpoint. VPRBP (Vpr (HIV-1) binding protein), also known as DCAF1 or RIP, is a 1,507 amino acid cytoplasmic protein that contains one LisH domain and functions as a Vpr binding protein. Expressed ubiquitously, VPRBP is thought to act as a receptor for the CUL-4-DDB1 complex and, in response to HIV infection, interacts with Vpr and may cause cell cycle arrest at the G<sub>2</sub> phase. Multiple isoforms of VPRBP exist due to alternative splicing events.

### REFERENCES

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- Borgne-Sanchez, A., et al. 2007. Targeted Vpr-derived peptides reach mitochondria to induce apoptosis of  $\alpha$ V $\beta$ 3-expressing endothelial cells. *Cell Death Differ.* 14: 422-435.
- Tan, L., et al. 2007. DDB1 and CUL-4A are required for human immunodeficiency virus type 1 Vpr-induced G<sub>2</sub> arrest. *J. Virol.* 81: 10822-10830.
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- McCall, C.M., et al. 2008. Human immunodeficiency virus type 1 Vpr-binding protein VPRBP, a WD40 protein associated with the DDB1-CUL4 E3 ubiquitin ligase, is essential for DNA replication and embryonic development. *Mol. Cell. Biol.* 28: 5621-5633.
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### CHROMOSOMAL LOCATION

Genetic locus: VPRBP (human) mapping to 3p21.2; Vprbp (mouse) mapping to 9 F1.

### SOURCE

VPRBP (K-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of VPRBP 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-82419 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

VPRBP (K-20) is recommended for detection of VPRBP of mouse, rat 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

VPRBP (K-20) is also recommended for detection of VPRBP in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for VPRBP siRNA (h): sc-76898, VPRBP siRNA (m): sc-76899, VPRBP shRNA Plasmid (h): sc-76898-SH, VPRBP shRNA Plasmid (m): sc-76899-SH, VPRBP shRNA (h) Lentiviral Particles: sc-76898-V and VPRBP shRNA (m) Lentiviral Particles: sc-76899-V.

Molecular Weight of VPRBP: 180 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.

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try **VPRBP (C-8): sc-376850**, our highly recommended monoclonal alternative to VPRBP (K-20).