

# VKORC1L1 (H-76): sc-98893

## BACKGROUND

Vitamin K is a cofactor that is essential for the posttranslational  $\gamma$ -carboxylation of many blood coagulation factors. Vitamin K epoxide reductase (VKOR) is a small transmembrane protein complex located in the endoplasmic reticulum that catalyzes both the reduction of vitamin K epoxide to vitamin K, as well as the conversion of vitamin K to vitamin K hydroquinone. VKOR complex 1 (VKORC1) is a subunit of VKOR that increases the production of reduced vitamin K cofactor. VKORC1 is the rate limiting step in the system and therefore plays a significant role as a regulatory protein. VKORC1L1 (vitamin K epoxide reductase complex subunit 1-like 1) is a paralog to VKORC1. There is 50% identity between VKORC1L1 and VKORC1. VKORC1L1 is more highly conserved between species (human, mouse and rat share 97% identity) but is not as widely expressed as VKORC1.

## REFERENCES

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- Rost, S. et al. 2004. Mutations in VKORC1 cause warfarin resistance and multiple coagulation factor deficiency type 2. *Nature* 427: 537-541.
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- Wajih, N., et al. 2005. Increased production of functional recombinant human clotting factor IX by baby hamster kidney cells engineered to over-express VKORC1, the vitamin K 2,3-epoxide-reducing enzyme of the vitamin K cycle. *J. Biol. Chem.* 280: 31603-31607.
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## CHROMOSOMAL LOCATION

Genetic locus: VKORC1L1 (human) mapping to 7q11.21; Vkorc1l1 (mouse) mapping to 5 G1.3.

## SOURCE

VKORC1L1 (H-76) is a rabbit polyclonal antibody raised against amino acids 101-176 mapping at the C-terminus of VKORC1L1 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.

## APPLICATIONS

VKORC1L1 (H-76) is recommended for detection of VKORC1L1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

VKORC1L1 (H-76) is also recommended for detection of VKORC1L1 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for VKORC1L1 siRNA (h): sc-61792, VKORC1L1 siRNA (m): sc-61793, VKORC1L1 shRNA Plasmid (h): sc-61792-SH, VKORC1L1 shRNA Plasmid (m): sc-61793-SH, VKORC1L1 shRNA (h) Lentiviral Particles: sc-61792-V and VKORC1L1 shRNA (m) Lentiviral Particles: sc-61793-V.

Molecular Weight of VKORC1L1: 18 kDa.

## RECOMMENDED SECONDARY REAGENT

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## 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.