



Anti-snake venom Vascular Endothelial Growth Factor-F

Catalog Number 105-PA01
Size 200µg
Lot Number (See product label)

Species Reactivity Bothrops Insularis
Isotype Polyclonal Rabbit IgG
Immunogen Recombinant scVEGF-F (RT# 300-096)
Accession codes:
Q90X24
AY033151.1

Preparation: Produced from sera of rabbits pre-immunized with highly pure (>95%) recombinant snake venom VEGF-F (Gly24-Val146) derived from E. coli.

Purification: Protein-A purified

Endotoxin level: < 0.1 EU/1µg of the antibody (LAL)

Formulation: Lyophilized from PBS, pH 7.2

Reconstitution: Centrifuge vial prior to opening. Reconstitute in sterile water to a concentration of 0.1-1.0 mg/ml.

Storage/Stability: The lyophilized antibody is stable at room temperature for up to 1 month. The reconstituted antibody is stable for at least two weeks at 2-8°C. Frozen aliquots are stable for at least 6 months when stored at -20°C. **Avoid repeated freeze-thaw cycles!**

APPLICATIONS

Western Blot: 2-5µg/mL

NOTE: Optimal dilutions should be determined by each laboratory for each application!

Country of Origin: Germany

For Research use only
Not for human use.

Product Information

Vascular endothelial growth factor (VEGF-A) and its family proteins are crucial regulators of blood vessel formation and vascular permeability. Snake venom has recently been shown to be an exogenous source of unique VEGF (known as VEGF-F), and now, two types of VEGF-F with distinct biochemical properties have been reported. VEGF-Fs (venom type VEGFs) are highly variable in structure and function among species, in contrast to endogenous tissue-type VEGFs (VEGF-As) of snakes. Although the structures of tissue-type VEGFs are highly conserved among venomous snake species and even among all vertebrates, including humans, those of venom-type VEGFs are extensively variegated, especially in the regions around receptor-binding loops and C-terminal putative coreceptor-binding regions, indicating that highly frequent variations are located around functionally key regions of the proteins. Genetic analyses suggest that venom-type VEGF gene may have developed from a tissue-type gene and that the unique sequence of its C-terminal region was generated by an alteration in the translation frame in the corresponding exons.

The svVEGF-F was identified during the generation of abundant expressed sequence tags from the *Viperidae* snake *Bothrops insularis* venom glands. The deduced primary sequence, after complete sequencing of the longest snake venom VEGF (svVEGF) cDNA, displayed similarity with vertebrate VEGFs and with the hypotensive factor from *Vipera aspis* venom. The mature svVEGF appears to be ubiquitously distributed throughout snake venoms and was also confirmed by Northern blot studies of other related *Viperidae* species and by cDNA cloning of svVEGF from *Bothrops jararaca* pit viper. The produced recombinant protein dimerizes after refolding processes and was biologically characterized, showing ability to increase vascular permeability. These results established that svVEGF is a novel and important active toxin during the early stages of bothropic snake bite envenoming and represents a new member of the VEGF family of proteins.

Reference

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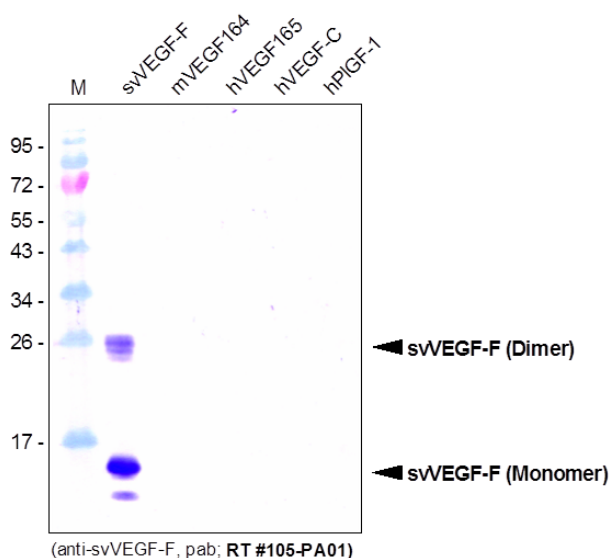


Figure 1: Western Blot Analysis using a Protein-A purified antibody against svVEGF-F (Bothrops Insularis). Recombinant svVEGF-F produced in E. coli was used for immunization. The antibody detects the monomeric svVEGF-F but shows no cross reactivity with related proteins like mouse und human VEGF-A, VEGF-C and PIGF. A weaker band is visible at about 26 kDa which correspond to the dimeric svVEGF-F.