

VCX/Y (P-15): sc-83950

BACKGROUND

Human chromosome X contains nearly 153 million base pairs and houses over 1,000 genes, while human chromosome Y contains approximately 58 million base pairs and houses over 80 genes. The VCX and VCY (variable charge X-linked and Y-linked, respectively) gene families are found on X and Y chromosomes and encode small, highly charged proteins that are expressed specifically on male germ cells and may be involved in spermatogenesis. There are six members of the VCX/Y family, namely VCX-A, VCX-B, VCX-B1, VCX-C, VCY and VCY1B, all of which share a high degree of homology, with the exception of an amino acid sequence that is tandemly repeated in VCX proteins but occurs only once in VCY proteins. Mutations or deletions in the genes encoding VCX proteins are associated with X-linked mental retardation.

REFERENCES

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2. Lahn, B.T. and Page, D.C. 2000. A human sex-chromosomal gene family expressed in male germ cells and encoding variably charged proteins. *Hum. Mol. Genet.* 9: 311-319.
3. Zou, S.W., et al. 2003. Expression and localization of VCX/Y proteins and their possible involvement in regulation of ribosome assembly during spermatogenesis. *Cell Res.* 13: 171-177.
4. Jiao, X., et al. 2006. Identification of an mRNA-decapping regulator implicated in X-linked mental retardation. *Mol. Cell* 24: 713-722.
5. Cuevas-Covarrubias, S.A., et al. 2008. Analysis of the VCX3A, VCX2 and VCX3B genes shows that VCX3A gene deletion is not sufficient to result in mental retardation in X-linked ichthyosis. *Br. J. Dermatol.* 158: 483-486.
6. Mochel, F., et al. 2008. Normal intelligence and social interactions in a male patient despite the deletion of NLGN4X and the VCX genes. *Eur. J. Med. Genet.* 51: 68-73.
7. Hansen, M.A., et al. 2008. A shared promoter region suggests a common ancestor for the human VCX/Y, SPANX, and CSAG gene families and the murine CYPT family. *Mol. Reprod. Dev.* 75: 219-229.
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SOURCE

VCX/Y (P-15) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of VCY of human origin.

PRODUCT

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

Blocking peptide available for competition studies, ready P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

VCX/Y (P-15) is recommended for detection of a broad range of VCX/Y protein family members of 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).

VCX/Y (P-15) is also recommended for detection of a broad range of VCX/Y protein family members in additional species, including equine.

Molecular Weight of VCX-A: 20 kDa.

Molecular Weight of VCX-B: 15 kDa.

Molecular Weight of VCX-B1: 22 kDa.

Molecular Weight of VCX-C: 23 kDa.

Molecular Weight of VCY: 13 kDa.

Molecular Weight of VCY1B: 13 kDa.

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.

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 or our catalog for detailed protocols and support products.