



## Bex4 (V-12): sc-66741

### BACKGROUND

The brain-expressed X-linked (Bex) family of proteins is expressed in the central nervous system, with highest levels detected in cerebellum, temporal lobe and pituitary tissues. Bex4, also known as Bex1-like 1, TCEAL7 or nerve growth factor receptor-associated protein 3, is a member of the Bex family involved in cell death regulation. It is expressed highly in heart, skeletal muscle and liver, localizing to the nucleus and the cytoplasm. Bex4 is frequently downregulated or inactivated by methylation in ovarian tumors and cancer cell lines. Forced expression of Bex4 induces apoptosis and reduces colony formation. This suggests that Bex4 acts as a tumor suppressor. Bex4 shares 50% sequence homology with the apoptosis-inducing domain of Bex3 and 77% sequence homology with its regulatory domain. Bex4 is located on the X chromosome and is subject to X chromosome inactivation.

### REFERENCES

1. Koo, J.H., Saraswati, M. and Margolis, F.L. 2005. Immunolocalization of Bex protein in the mouse brain and olfactory system. *J. Comp. Neurol.* 487: 1-14.
2. Han, C., Liu, H., Liu, J., Yin, K., Xie, Y., Shen, X., Wang, Y., Yuan, J., Qiang, B., Liu, Y.J. and Peng, X. 2005. Human Bex2 interacts with LMO2 and regulates the transcriptional activity of a novel DNA-binding complex. *Nucleic Acids Res.* 33: 6555-6565.
3. Winter, E.E. and Ponting, C.P. 2005. Mammalian BEX, WEX and GASP genes: coding and non-coding chimaerism sustained by gene conversion events. *BMC Evol. Biol.* 5: 54-54.
4. Alvarez, E., Zhou, W., Witte, S.E. and Freed, C.R. 2005. Characterization of the Bex gene family in humans, mice, and rats. *Gene* 357: 18-28.
5. Chien, J., Staub, J., Avula, R., Zhang, H., Liu, W., Hartmann, L.C., Kaufmann, S.H., Smith, D.I. and Shridhar, V. 2005. Epigenetic silencing of TCEAL7 (Bex4) in ovarian cancer. *Oncogene* 24: 5089-5100.
6. Delgado, I.J., Kim, D.S., Thatcher, K.N., LaSalle, J.M. and Van den Veyver, I.B. 2006. Expression profiling of clonal lymphocyte cell cultures from Rett syndrome patients. *BMC Med. Genet.* 7: 61-61.
7. Naderi, A., Teschendorff, A.E., Beigel, J., Cariati, M., Ellis, I.O., Brenton, J.D. and Caldas, C. 2007. Bex2 is overexpressed in a subset of primary breast cancers and mediates nerve growth factor/nuclear factor  $\kappa$ B inhibition of apoptosis in breast cancer cell lines. *Cancer Res.* 67: 6725-6736.
8. Chadalavada, R.S., Korkola, J.E., Houldsworth, J., Olshen, A.B., Bosl, G.J., Studer, L. and Chaganti, R.S. 2007. Constitutive gene expression predisposes morphogen-mediated cell fate responses of NT2/D1 and 27X-1 human embryonal carcinoma cells. *Stem Cells* 25: 771-778.

### STORAGE

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

### PROTOCOLS

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

### CHROMOSOMAL LOCATION

Genetic locus: Bex4 (mouse) mapping to X F1.

### SOURCE

Bex4 (V-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Bex4 of mouse 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-66741 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

Bex4 (V-12) is recommended for detection of Bex4 of mouse 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).

Suitable for use as control antibody for Bex4 siRNA (m): sc-62020, Bex4 shRNA Plasmid (m): sc-62020-SH and Bex4 shRNA (m) Lentiviral Particles: sc-62020-V.

Molecular Weight of Bex4: 14 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.

### RESEARCH USE

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