

brevican (V-20): sc-20555

BACKGROUND

Brain tissue expresses a number of different proteoglycans, including both heparan sulfate- and chondroitin sulfate-containing species. While heparan sulfate proteoglycans are present mainly on the cell surface, chondroitin sulfate proteoglycans (CSPGs) are distributed mainly in extracellular spaces of the brain. Brevican is a brain proteoglycan of the aggrecan/versican/neurocan family. In the adult brain, the brevican core protein undergoes proteolytic cleavage and exists as a full-length form, a carboxy-terminal fragment and an amino-terminal fragment. This protein is named brevican since it is the shortest core protein in this family, from the Latin word "brevis", meaning "short". A significant amount of brevican devoid of any glycosaminoglycan chains is present in brain, indicating that brevican is a "part-time" proteoglycan. The gene which encodes brevican maps to mouse chromosome 3 between microsatellite markers D3Mit22 and D3Mit11.

REFERENCES

1. Yamada, H., Watanabe, K., Shimonaka, M. and Yamaguchi, Y. 1994. Molecular cloning of brevican, a novel brain proteoglycan of the aggrecan/versican family. *J. Biol. Chem.* 269: 10119-10126.
2. Yamada, H., Watanabe, K., Shimonaka, M., Yamasaki, M. and Yamaguchi, Y. 1995. cDNA cloning and the identification of an aggrecanase-like cleavage site in rat brevican. *Biochem. Biophys. Res. Commun.* 216: 957-963.
3. Rauch, U., Meyer, H., Brakebusch, C., Seidenbecher, C., Gundelfinger, E.D., Beier, D.R. and Fassler, R. 1997. Sequence and chromosomal localization of the mouse brevican gene. *Genomics* 44: 15-21.
4. Zhang, H., Kelly, G., Zerillo, C., Jaworski, D.M. and Hockfield, S. 1998. Expression of a cleaved brain-specific extracellular matrix protein mediates glioma cell invasion *in vivo*. *J. Neurosci.* 7: 2370-2376.
5. Aspegren, A., Adam, S., Kostka, G., Timpl, R. and Heinegard, D. 1999. Fibulin-1 is a ligand for the C-type lectin domains of aggrecan and versican. *J. Biol. Chem.* 274: 20444-20449.
6. LocusLink Report(LocusID:600347). <http://www.ncbi.nlm.nih.gov/LocusLink/>

CHROMOSOMAL LOCATION

Genetic locus: BCAN (human) mapping to 1q23.1; Bcan (mouse) mapping to 3 F1.

SOURCE

brevican (V-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of brevican of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-20555 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

brevican (V-20) is recommended for detection of brevican of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

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

Suitable for use as control antibody for brevican siRNA (h): sc-41899, brevican siRNA (m): sc-41900, brevican shRNA Plasmid (h): sc-41899-SH, brevican shRNA Plasmid (m): sc-41900-SH, brevican shRNA (h) Lentiviral Particles: sc-41899-V and brevican shRNA (m) Lentiviral Particles: sc-41900-V.

Molecular Weight of full length brevican: 145 kDa.

Molecular Weight of brevican N-terminal cleavage product: 50 kDa.

Molecular Weight of brevican C-terminal cleavage product: 80 kDa.

Positive Controls: rat brain extract: sc-2392.

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

MONOS
Satisfaction
Guaranteed

Try **aggrecan/brevican (D-4): sc-166951** or **brevican (2): sc-135849**, our highly recommended monoclonal alternatives to brevican (V-20).