



## BRS-3 (N-14): sc-33404

### BACKGROUND

Bombesin receptor subtype-3 (BRS-3) is an integral membrane protein belonging to the G protein-coupled receptor 1 family. The gene encoding for the BRS-3 protein maps against chromosome Xq26-q28. BRS-3 is important in sperm cell division, maturation and function. Its actions are mediated by G protein interactions which activate a phosphatidylinositol-calcium second messenger system. BRS-3 is expressed in germ cells in testis and in lung carcinoma cells. Unlike other bombesin proteins, BRS-3 does not seem to be detected in the gut and central nervous system, but has been found in rat gastrointestinal tract. Mice lacking the gene encoding for BRS-3 develop obesity, suggesting that BRS-3 may play a role in the regulation of plasma insulin concentration.

### REFERENCES

1. Fathi, Z., et al. 1993. BRS-3: a novel bombesin receptor subtype selectively expressed in testis and lung carcinoma cells. *J. Biol. Chem.* 268: 5979-5984.
2. Gorbulev, V., et al. 1994. Organization and chromosomal localization of the gene for the human bombesin receptor subtype expressed in pregnant uterus. *FEBS Lett.* 340: 260-264.
3. Weber, D., et al. 2003. Design of selective peptidomimetic agonists for the human orphan receptor BRS-3. *J. Med. Chem.* 46: 1918-1930.
4. Matsumoto, K., et al. 2003. Bombesin receptor subtype-3 modulates plasma insulin concentration. *Peptides* 24: 83-90.
5. Boyle, RG., et al. 2005. The design of a new potent and selective ligand for the orphan bombesin receptor subtype 3 (BRS3). *J. Pept. Sci.* 11: 136-141.
6. Porcher, C., et al. 2005. Bombesin receptor subtype-3 is expressed by the enteric nervous system and by interstitial cells of Cajal in the rat gastrointestinal tract. *Cell Tissue Res.* 320: 21-31.

### CHROMOSOMAL LOCATION

Genetic locus: BRS3 (human) mapping to Xq26-q28.

### SOURCE

BRS-3 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an N-terminal extracellular domain of bombesin receptor subtype-3 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-33404 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### STORAGE

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

### APPLICATIONS

BRS-3 (N-14) is recommended for detection of bombesin receptor subtype-3 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).

Suitable for use as control antibody for BRS-3 siRNA (h): sc-44787.

Molecular Weight of BRS-3: 44 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.

### PROTOCOLS

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