

BRS-3 (B-5): sc-271712

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 Xq26.3. 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, R.G., et al. 2005. The design of a new potent and selective ligand for the orphan bombesin receptor subtype-3 (BRS-3). *J. Pept. Sci.* 11: 136-141.

CHROMOSOMAL LOCATION

Genetic locus: BRS3 (human) mapping to Xq26.3; Brs3 (mouse) mapping to X A5.

SOURCE

BRS-3 (B-5) is a mouse monoclonal antibody raised against amino acids 27-84 mapping near the N-terminus of Bombesin Receptor Subtype-3 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

BRS-3 (B-5) is available conjugated to agarose (sc-271712 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271712 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271712 PE), fluorescein (sc-271712 FITC), Alexa Fluor® 488 (sc-271712 AF488), Alexa Fluor® 546 (sc-271712 AF546), Alexa Fluor® 594 (sc-271712 AF594) or Alexa Fluor® 647 (sc-271712 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271712 AF680) or Alexa Fluor® 790 (sc-271712 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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RESEARCH USE

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

APPLICATIONS

BRS-3 (B-5) is recommended for detection of BRS-3 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for BRS-3 siRNA (h): sc-44787, BRS-3 siRNA (m): sc-44788, BRS-3 shRNA Plasmid (h): sc-44787-SH, BRS-3 shRNA Plasmid (m): sc-44788-SH, BRS-3 shRNA (h) Lentiviral Particles: sc-44787-V and BRS-3 shRNA (m) Lentiviral Particles: sc-44788-V.

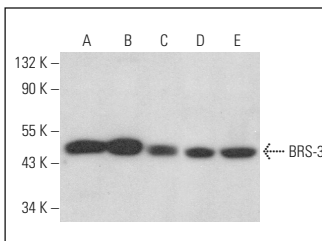
Molecular Weight of BRS-3: 44 kDa.

Positive Controls: MDA-MB-231 cell lysate: sc-2232, H4 cell lysate: sc-2408 or PC-3 cell lysate: sc-2220.

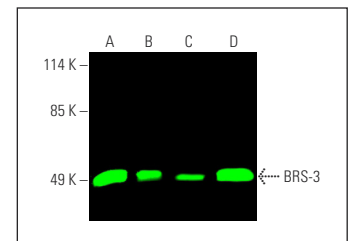
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



BRS-3 (B-5): sc-271712. Western blot analysis of BRS-3 expression in MDA-MB-231 (A), MCF7 (B), BT-20 (C), F9 (D) and NIH/3T3 (E) whole cell lysates.



BRS-3 (B-5): sc-271712. Near-infrared western blot analysis of BRS-3 expression in MCF7 (A), H4 (B), NIH/3T3 (C) and PC-3 (D) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.

SELECT PRODUCT CITATIONS

1. Yao, X., et al. 2023. Lack of bombesin receptor-activated protein homologous protein impairs hippocampal synaptic plasticity and promotes chronic unpredictable mild stress induced behavioral changes in mice. *Stress* 26: 1-14.

STORAGE

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