

Product Specification Sheet

Bombesin Receptor Subtype-3 (BRS-3) Antibodies

Cat. BRS31-S	Rabbit Anti-Human BRS-3 antiserum	SIZE: 100ul
Cat. BRS31-A	Rabbit Anti- Human BRS-3 IgG (aff pure)	SIZE: 100 ug
Cat. BRS31-P	Human BRS-31 Control/blocking peptide	SIZE: 100 ug/

Bombesin (BN) is a tetradecapeptide (Pyro-ENR LGN QWA VGH LM-amide) that was originally isolated from frog skin. Several BN-related peptides have been isolated from amphibians and classified into three subfamilies: Bombesin, ranatensin, and phylloitorin based upon the last three C-terminal residues. Two BN-like peptides have been identified in mammals: NMB (neuromedin B) in the ranatensin family and GRP (gastrin-releasing peptide) in the BN-family. BN-family of G-protein coupled receptors includes at least four receptor subtypes: The GRP-preferring receptors (GRP-R or bb2), the NMB-preferring receptors (NMB-R or bb1) and Bombesin receptor subtype 3 (**BRS-3** or **bb4**). These receptors share approx. 50% amino acid homology and bind bombesin. However, BRS-3 has much lower affinity for BN than GRP-R and NMB-R. Mammalian BN-like peptides are widely distributed in the brain and gastrointestinal tract, where they modulate smooth-muscle contraction, exocrine and endocrine activities, metabolism and behavior. Most recently, BRS-3 deficient mice have been shown to develop mild obesity, associated with hypertension, and impairment of glucose metabolism, reduced metabolic rate, increased feeding efficiency and subsequent hyperphagia. Human BRS-3 gene (chromosome x) encodes a 399 aa protein with seven transmembrane domains.

Source of Antigen and Antibodies

Antigen	17aa peptide of Human BRS3 Designated (BRS31-P or control/blocking peptide). Epitope location ~ C-terminus
Ab Host/type	Rabbit, Polyclonal unpurified antiserum (BRS31-S) and IgG, purified over antigen-agarose (Cat # BRS31-A) supplied in PBS+0.1% BSA+0.05% azide
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
-ve control	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as –ve control

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)

100ul solution lyophilized powder
Supplied in Buffer: 0.05% azide
Reconstitute powder in 100 ul PBS

Affinity pure IgG

100 ug/100ul solution lyophilized powder
Supplied in **Buffer:** PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide

100 ug/100 ul solution lyophilized powder
Supplied in Buffer: PBS pH 7.5,
Reconstitute powder in PBS at 1 mg/ml.

Storage

Short-term: unopened, undiluted liquid vials at 20°C and powder at 4°C or -20°C..

Long-term: at -20°C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at -20°C or below.

Shipping: 4°C for solutions and room temp for powder

Recommended Usage

Western Blotting (1:1K-5K for neat serum and 1-10 ug/ml for affinity pure using Chemiluminescence technique).

ELISA (1:10K-1:100K; using 50-100 ng of control peptide/well).

Histochemistry & Immunofluorescence: not tested. We recommend the use of affinity purified antibody at 2-20 ug/ml.

Specificity & Cross-reactivity

The immunogenic peptide sequence from BRS-3 (BRS31-P) shows 70% homology with sheep, 64% with mouse and 58% with rat BRS-3 (1). The peptide shows no significant homology with other known proteins. The BRS-3 antibody cross-reactivity in other species is not known. The appropriate control immunogenic peptides are also available to confirm specificity of antibodies. Control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity (see detailed protocol at:the web site).

General References:

(1) Fathi, Z et al., (1993) *JBC* **268**, 5979-5984; Gorbulev, V. et al., *FEBS Lett.* **340**, 260-264; Ohki-Hamazaki, H. et al., (1997) **390**, 165-169.

*This product is for *in vitro* research use only.

Related material available from ADI:

Antibodies against Leptin Receptor, Taurine Transporter; Creatine Transporter; GAT1-3; GABA Transporter; Bombesin Receptor; Betaine/GABA Transporter etc.

BRS31-S-A-P

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