

bradykinin B1 R (F-11): sc-518136

BACKGROUND

Kinins are important biologically active peptides that mediate cardiovascular homeostasis, inflammation and nociception. Bradykinin, the major effector peptide of the kallikrein-kinin system, is regulated by angiotensin-converting enzyme (ACE), which degrades the peptide. Bradykinin normally exerts its effects through the activation of two seven transmembrane G protein-coupled receptors, named B1 and B2. The B2 receptor is constitutively expressed and preferentially binds full length bradykinin. Deletion of the B2 receptor leads to salt-sensitive hypertension and altered nociception in mice. The B1 receptor binds to derivatives of bradykinin and kallidin, which are produced by carboxypeptidase action to generate the products des-Arg⁹-bradykinin and des-Arg¹⁰-kallidin, respectively. The expression of the B1 receptor is inducible by inflammatory mediators, such as bacterial lipopolysaccharide (LPS) and cytokines. The B1 and B2 receptors represent potential therapeutic targets for treatment of inflammatory disorders and cardiovascular diseases.

REFERENCES

1. Trifilieff, A., et al. 1993. Kinins and respiratory tract diseases. *Eur. Respir. J.* 6: 576-587.
2. Borkowski, J.A., et al. 1995. Targeted disruption of a B2 bradykinin receptor gene in mice eliminates bradykinin action in smooth muscle and neurons. *J. Biol. Chem.* 270: 13706-13710.
3. Rupniak, N.M., et al. 1997. Effects of the bradykinin B1 receptor antagonist des-Arg⁹[Leu⁸]bradykinin and genetic disruption of the B2 receptor on nociception in rats and mice. *Pain* 71: 89-97.
4. Ni, A., et al. 1998. Transcription factor nuclear factor κ B regulates the inducible expression of the human B1 receptor gene in inflammation. *J. Biol. Chem.* 273: 2784-2791.

CHROMOSOMAL LOCATION

Genetic locus: BDKRB1 (human) mapping to 14q32.2; Bdkrb1 (mouse) mapping to 12 E.

SOURCE

bradykinin B1 R (F-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 230-250 of bradykinin B1 R of human origin.

PRODUCT

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

bradykinin B1 R (F-11) is available conjugated to agarose (sc-518136 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518136 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518136 PE), fluorescein (sc-518136 FITC), Alexa Fluor[®] 488 (sc-518136 AF488), Alexa Fluor[®] 546 (sc-518136 AF546), Alexa Fluor[®] 594 (sc-518136 AF594) or Alexa Fluor[®] 647 (sc-518136 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-518136 AF680) or Alexa Fluor[®] 790 (sc-518136 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

bradykinin B1 R (F-11) is recommended for detection of bradykinin B1 R of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 bradykinin B1 R siRNA (h): sc-39878, bradykinin B1 R siRNA (m): sc-39879, bradykinin B1 R shRNA Plasmid (h): sc-39878-SH, bradykinin B1 R shRNA Plasmid (m): sc-39879-SH, bradykinin B1 R shRNA (h) Lentiviral Particles: sc-39878-V and bradykinin B1 R shRNA (m) Lentiviral Particles: sc-39879-V.

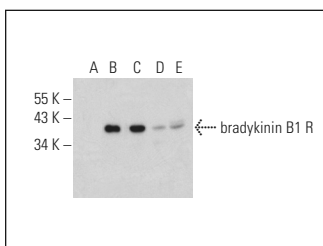
Molecular Weight of bradykinin B1 R: 35 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, bradykinin B1 R (h2): 293T Lysate: sc-171316 or KNRK whole cell lysate: sc-2214.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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 L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ 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



bradykinin B1 R (F-11): sc-518136. Western blot analysis of bradykinin B1 R expression in 293T (A), sc-171316 (H2020) (B), MCF7 (C), KNRK (D) and A-10 (E) whole cell lysates. Detection reagent used: m-IgG κ BP-HRP: sc-516102.

STORAGE

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

RESEARCH USE

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