SANTA CRUZ BIOTECHNOLOGY, INC.

BRE (C-9): sc-271031

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Brain and reproductive organ-expressed protein (BRE) is a 415 amino acid protein which binds to the intracellular juxtamembrane domain of the death receptor, tumor necrosis factor receptor 1 (TNF-R1). BRE also binds to the death receptor, FAS. BRE downregulates TNFα-induced activation of NFκB and may play a role in homeostasis or cellular differentiation in cells of epithelial, neural and germ line origins. It inhibits components of the death-inducing signaling complexes that are necessary for activation of the mitochondria, thereby mediating apoptosis. BRE is strongly expressed in the adrenal cortex, medulla, testis and pancreas, and is weakly expressed in the thymus, thyroid, stomach and small intestine. The BRE gene is responsive to DNA-damaging agents in fibroblasts, LPS in peripheral blood mononuclear cells (PBMC), and by retinoic acid in brain gloima.

REFERENCES

1. Li, L., et al. 1995. Identification of a brain and reproductive organs-specific gene responsive to DNA damage and retinoic acid. Biochem. Biophys. Res. Commun. 206: 764-774.
2. Gu, C., et al. 1998. BRE: a modulator of TNFα action. FASEB J. 12: 1101-1108.
3. Li, Q., et al. 2004. A death receptor-associated anti-apoptotic protein, BRE, inhibits mitochondrial apoptotic pathway. J. Biol. Chem. 279: 52106-52116.
4. Chan, B.C., et al. 2005. BRE enhances *in vivo* growth of tumor cells. Biochem. Biophys. Res. Commun. 326: 268-273.
5. Miao, J., et al. 2005. Blocking BRE expression in Leydig cells inhibits steroidogenesis by downregulating 3β-hydroxysteroid dehydrogenase. J. Endocrinol. 185: 507-517.

CHROMOSOMAL LOCATION

Genetic locus: BRE (human) mapping to 2p23.2; Bre (mouse) mapping to 5 B1.

SOURCE

BRE (C-9) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of BRE of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-271031 X, 200 µg/0.1 ml.

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 for detailed protocols and support products.

APPLICATIONS

BRE (C-9) is recommended for detection of BRE 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 BRE siRNA (h): sc-60288, BRE siRNA (m): sc-60289, BRE shRNA Plasmid (h): sc-60288-SH, BRE shRNA Plasmid (m): sc-60289-SH, BRE shRNA (h) Lentiviral Particles: sc-60288-V and BRE shRNA (m) Lentiviral Particles: sc-60289-V.

BRE (C-9) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

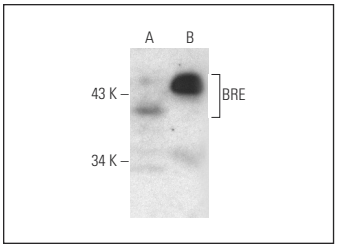
Molecular Weight of BRE: 44 kDa.

Positive Controls: BRE (h): 293 Lysate: sc-110575.

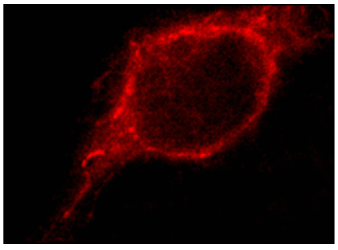
RECOMMENDED SUPPORT REAGENTS

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



BRE (C-9): sc-271031. Western blot analysis of BRE expression in non-transfected: sc-110760 (**A**) and human BRE transfected: sc-110575 (**B**) 293 whole cell lysates.



BRE (C-9): sc-271031. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Wu, D., et al. 2017. Usefulness of p16/CDKN2A fluorescence *in situ* hybridization and BAP1 immunohistochemistry for the diagnosis of biphasic mesothelioma. Ann. Diagn. Pathol. 26: 31-37.

RESEARCH USE

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