

BRE (D-2): sc-376453

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 TNF α -induced activation of NF κ B 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 glioma.

REFERENCES

- 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.
- Gu, C., et al. 1998. BRE: a modulator of TNF- α action. *FASEB J.* 12: 1101-1108.
- Li, Q., et al. 2004. A death receptor-associated anti-apoptotic protein, BRE, inhibits mitochondrial apoptotic pathway. *J. Biol. Chem.* 279: 52106-52116.
- Chan, B.C., et al. 2005. BRE enhances *in vivo* growth of tumor cells. *Biochem. Biophys. Res. Commun.* 326: 268-273.

CHROMOSOMAL LOCATION

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

SOURCE

BRE (D-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1-21 at the N-terminus of BRE of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ 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-376453 X, 200 μ g/0.1 ml.

BRE (D-2) is available conjugated to agarose (sc-376453 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376453 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376453 PE), fluorescein (sc-376453 FITC), Alexa Fluor[®] 488 (sc-376453 AF488), Alexa Fluor[®] 546 (sc-376453 AF546), Alexa Fluor[®] 594 (sc-376453 AF594) or Alexa Fluor[®] 647 (sc-376453 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-376453 AF680) or Alexa Fluor[®] 790 (sc-376453 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-376453 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

BRE (D-2) 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 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

BRE (D-2) is also recommended for detection of BRE in additional species, including equine, canine, bovine and avian.

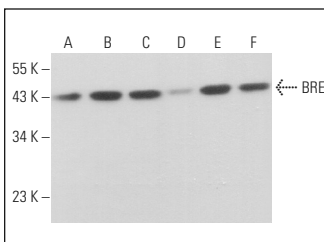
Suitable for use as control antibody for BRE siRNA (h): sc-60288, BRE siRNA (m): sc-60289, BRE shRNA Plasmid (h): sc-60288-SH, BRE shRNA Plasmid (m): sc-60289-SH, BRE shRNA (h) Lentiviral Particles: sc-60288-V and BRE shRNA (m) Lentiviral Particles: sc-60289-V.

BRE (D-2) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

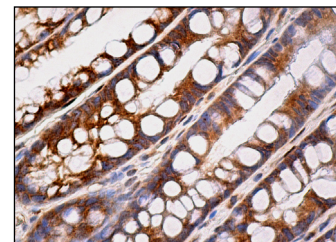
Molecular Weight of BRE: 44 kDa.

Positive Controls: Raji whole cell lysate: sc-364236, NIH/3T3 whole cell lysate: sc-2210 or K-562 whole cell lysate: sc-2203.

DATA



BRE (D-2): sc-376453. Western blot analysis of BRE expression in Raji (A), NIH/3T3 (B), K-562 (C), RD (D), EOC 20 (E) and SW-13 (F) whole cell lysates.



BRE (D-2): sc-376453. Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

- Biswas, K., et al. 2018. BRE/BRCC45 regulates CDC25A stability by recruiting USP7 in response to DNA damage. *Nat. Commun.* 9: 537.

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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.