

BLM hydrolase (F-9): sc-166777

BACKGROUND

BLM hydrolase (bleomycin hydrolase, BMH) is a 455 amino acid protein encoded by the human gene BLMH. BLM hydrolase belongs to the cysteine protease papain superfamily and the peptidase C1 family. It is a cytoplasmic cysteine peptidase commonly found as a homohexamer. It is highly conserved through evolution, however, the only known activity of the enzyme is metabolic inactivation of the glycopeptide bleomycin (BLM). BLM is an essential component of combination chemotherapy regimens for cancer.

REFERENCES

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- Riva, P., et al. 2000. NF1 microdeletion syndrome: refined fish characterization of sporadic and familial deletions with locus-specific probes. *Am. J. Hum. Genet.* 66: 100-109.
- Prince, J.A., et al. 2001. Lack of replication of association findings in complex disease: an analysis of 15 polymorphisms in prior candidate genes for sporadic Alzheimer's disease. *Eur. J. Hum. Genet.* 9: 437-444.
- Bentivegna, A., et al. 2001. Identification of duplicated genes in 17q11.2 using fish on stretched chromosomes and DNA fibers. *Hum. Genet.* 109: 48-54.
- Kim, S.J., et al. 2002. Transmission disequilibrium mapping at the serotonin transporter gene (SLC6A4) region in autistic disorder. *Mol. Psychiatry* 7: 278-288.
- Montoya, S.E., et al. 2007. Astrogliosis and behavioral changes in mice lacking the neutral cysteine protease bleomycin hydrolase. *Neuroscience* 146: 890-900.

CHROMOSOMAL LOCATION

Genetic locus: BLMH (human) mapping to 17q11.2; Blmh (mouse) mapping to 11 B5.

SOURCE

BLM hydrolase (F-9) is a mouse monoclonal antibody raised against amino acids 1-300 mapping at the N-terminus of BLM hydrolase 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.

BLM hydrolase (F-9) is available conjugated to agarose (sc-166777 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166777 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166777 PE), fluorescein (sc-166777 FITC), Alexa Fluor® 488 (sc-166777 AF488), Alexa Fluor® 546 (sc-166777 AF546), Alexa Fluor® 594 (sc-166777 AF594) or Alexa Fluor® 647 (sc-166777 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166777 AF680) or Alexa Fluor® 790 (sc-166777 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

BLM hydrolase (F-9) is recommended for detection of BLM hydrolase 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), 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).

Suitable for use as control antibody for BLM hydrolase siRNA (h): sc-72654, BLM hydrolase siRNA (m): sc-72655, BLM hydrolase shRNA Plasmid (h): sc-72654-SH, BLM hydrolase shRNA Plasmid (m): sc-72655-SH, BLM hydrolase shRNA (h) Lentiviral Particles: sc-72654-V and BLM hydrolase shRNA (m) Lentiviral Particles: sc-72655-V.

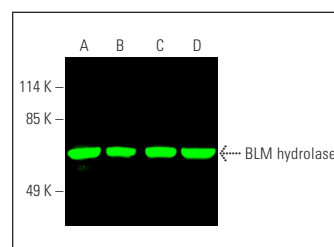
Molecular Weight of BLM hydrolase: 53 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, HL-60 whole cell lysate: sc-2209 or MOLT-4 cell lysate: sc-2233.

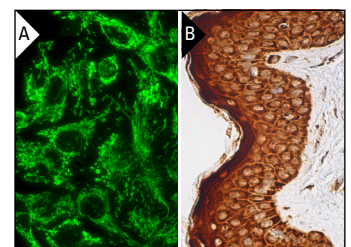
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



BLM hydrolase (F-9): sc-166777. Near-infrared western blot analysis of BLM hydrolase expression in CCRF-CEM (A), HL-60 (B), MOLT-4 (C) and K-562 (D) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.



BLM hydrolase (F-9): sc-166777. Immunofluorescence staining of formalin-fixed Hep G2 cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic staining of epidermal cells (B).

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.