Human BLMH/Bleomycin Hydrolase Antibody

Monoclonal Mouse IgG_{2B} Clone # 760239

Catalog Number: MAB6200

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human BLMH/Bleomycin Hydrolase in direct ELISAs. It detects human, mouse and rat BLMH/Bleomycin Hydrolase in Western Blots.
Source	Monoclonal Mouse IgG_{2B} Clone # 760239
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant human BLMH/Bleomycin Hydrolase Ser2-Glu455 Accession # Q13867
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 μm filtered solution in PBS.

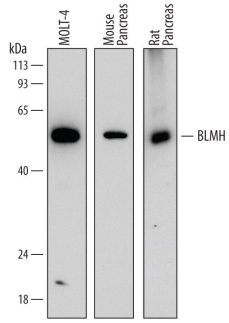
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.2 µg/mL	See Below
Immunohistochemistry	8-25 µg/mL	See Below

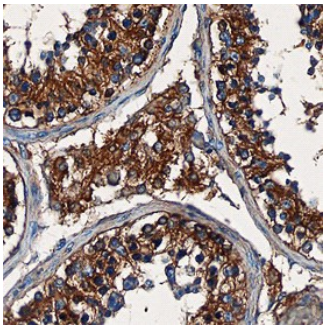
DATA

Western Blot



Detection of Human, Mouse, and Rat BLMH/ Bleomycin Hydrolase by Western Blot. Western blot shows lysates of MOLT-4 human acute lymphoblastic leukemia cell line, mouse pancreas tissue, and rat pancreas tissue. PVDF membrane was probed with 0.2 µg/mL of Mouse Anti-Human BLMH/Bleomycin Hydrolase Monoclonal Antibody (Catalog # MAB6200) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF018). A specific band was detected for BLMH/Bleomycin Hydrolase at approximately 52 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunohistochemistry



BLMH/Bleomycin Hydrolase in Human Testis. BLMH/Bleomycin Hydrolase was detected in immersion fixed paraffin-embedded sections of human testis using Mouse Anti-Human BLMH/Bleomycin Hydrolase Monoclonal Antibody (Catalog # MAB6200) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific staining was localized to spermatocytes. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.5 mg/mL.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Bleomycin Hydrolase (BLMH) is a cysteine peptidase of the papain superfamily. It is named for its ability to hydrolyze the antitumor agent bleomycin and inactivate it (1). It has a papain-like catalytic triad (Cys-His-Asp) with optimum activity at neutral pH. In mammals it is expressed ubiquitously in all types of tissues and its expression is up-regulated in many tumors. It is present in the cytoplasm as homohexameric protein of approximately 300 kDa. In addition to its aminopeptidase activity, it has homocysteine-thiolactonase activity. BLMH inactivates bleomycin, a glycopeptide anticancer agent, by deaminating it (2). BLMH has been suggested to play a role in the generation of MHC class I-presented peptides (3, 4). Diminished BLMH activity may contribute to the pathology of Alzheimer's disease (AD) (5, 6). It is inhibited by cysteine protease inhibitors such as N-ethylmaleimide, iodoacetamide, para-hydroxymercuribenzoate, and E-64.

References:

1. Joshua-Tor, L. and S. A. Johnson (2004) in Handbook of Proteolytic Enzymes, Barrett, A. J. *et al.* eds. pp. 1197.
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3. Kim, E. *et al.* (2009) J. Immunol. **183**:7379.
4. Towne, C. F. *et al.* (2007) J. Immunol. **178**:6923.
5. Suszynska, J. *et al.* (2010) J. Alzheimers Dis. **19**:1177.
6. Lefterov, I. M. *et al.* (2000) FASEB J. **14**:1837.

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