Human/Mouse BLMH/Bleomycin Hydrolase Antibody

Antigen Affinity-purified Polyclonal Sheep IgG

Catalog Number: AF6200

DESCRIPTION

Species Reactivity	Human/Mouse
Specificity	Detects human and mouse BLMH in direct ELISAs and Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human BLMH 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 either lyophilized or as a 0.2 μm filtered solution in PBS.

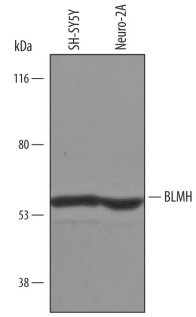
APPLICATIONS

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	1 µg/mL	See Below

DATA

Western Blot



Detection of Human and Mouse BLMH by Western Blot. Western blot shows lysates of SH-SY5Y human neuroblastoma cell line and Neuro-2A mouse neuroblastoma cell line. PVDF Membrane was probed with 1 µg/mL of Human BLMH Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6200) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for BLMH at approximately 53 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 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. The normal physiological function of BLMH is not clear. 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.
2. Schwartz, D. R. *et al.* (1999) Proc. Natl. Acad. Sci. USA, **96**:4680.
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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