

DESCRIPTION

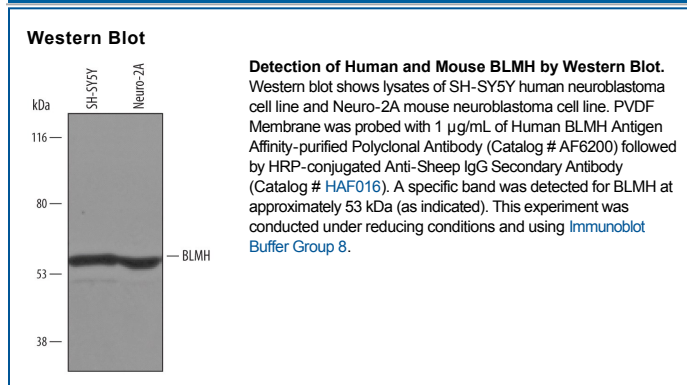
Species Reactivity	Human/Mouse
Specificity	Detects human and mouse BLMH in direct ELISAs and Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human BLMH Ser2-Glu455 Accession # Q13867
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied 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



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. <ul style="list-style-type: none"> • 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 homo-hexameric 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.