

**MONOCLONAL ANTIBODY TO HUMAN BACTERICIDAL  
PERMEABILITY INCREASING PROTEIN (BPI)  
clone 4H5**



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| <b>Catalog nr</b>            | HM2042 (lot number and expiry date are indicated on the label)  |
| <b>Description</b>           | <p>The monoclonal antibody 4H5 reacts specifically with full length human natural and recombinant Bactericidal Permeability Increasing protein (BPI). The antimicrobial protein BPI is a 55 kDa protein found in the primary (azurophilic) granules of human neutrophils and has also been detected on surface of neutrophils, small intestinal and oral epithelial cells. BPI is a bactericidal compound that is present in polymorphonuclear cells (PMN) and in lower levels in the specific granules of eosinophils. BPI possesses high affinity toward the lipid A region of lipopolysaccharides (LPS) that comprise the outer leaflet of the gram-negative bacterial outer membrane. Binding of BPI to the lipid A moiety of LPS exerts multiple anti-infective activities against gram-negative bacteria: 1) cytotoxicity via sequential damage to bacterial outer and inner lipid membranes, 2) neutralization of gram-negative bacterial LPS, 3) opsonization of bacteria to enhance phagocytosis by neutrophils. Airway epithelial cells constitutively express the BPI gene and produce the BPI protein and, therefore, BPI may be a critical determinant in the development of LPS-triggered airways disease. Inflammation induced by LPS possibly contributes to the development of rapid airflow decline, a serious and often fatal complication of hematopoietic cell transplantation. Furthermore, a 21 kDa bioactive recombinant fragment of BPI, rBPI<sub>21</sub>, was shown to confer a survival advantage against invasive pneumococcal disease by binding to the gram-positive bacterial pathogen, pneumolysin.</p> <p>The monoclonal antibody 4H5 recognizes only free BPI and does not interact with BPI that has formed a complex with LPS.</p> |
| <b>Species</b>               | Mouse IgG <sub>1</sub>  |
| <b>Formulation</b>           | 1 ml (100 µg/ml) 0.2 µm filtered antibody solution in PBS, containing 0.1% bovine serum albumin and 0.02 % sodium azide.  |
| <b>Application</b>           | The monoclonal antibody 4H5 can be used for immuno assays both as coating and as detector.  |
| <b>Storage and stability</b> | Product should be stored at 4°C. Under recommended storage conditions, product is stable for one year.  |
| <b>Precautions</b>           | For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and Federal rules in the use of this product. Hycult Biotech is not responsible for any patent infringements that might result with the use or derivation of this product.  |
| <b>Also available</b>        | HM2040                      Monoclonal antibody against Human LBP, clone 6G3<br>HM2041                      Monoclonal antibody against Human BPI, clone 3F9<br>HM2043                      Monoclonal antibody against Human CD14, clone MEM-18<br>HM2170                      Monoclonal antibody against Human BPI, clone 4E3<br>HP9022                      Polyclonal antibody against Human BPI   |