

**CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET**

<b>Product name</b>	BPI, Human, clone 4H5	<b>Expiry date</b>	-
<b>Catalog number</b>	HM2042-100UG		
<b>Lot number</b>	-	<b>Amount</b>	100 µg
<b>Volume</b>	1 ml	<b>Concentration</b>	100 µg/ml
<b>Formulation</b>	0.2 µm filtered in PBS+0.1%BSA+0.02%NaN3	<b>Conjugate</b>	None
<b>Host Species</b>	Mouse IgG1	<b>Purification</b>	Protein G
<b>Endotoxin</b>	N.A.		
<b>Storage</b>	4°C		

**Application notes**

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #								
Yes						•		
No								
N.D.	•	•	•	•	•		•	•

N.D.= Not Determined; IHC = Immuno histochemistry; F = Frozen sections; P = Paraffin sections; IF = Immuno Fluorescence; FC = Flow Cytometry; FS = Functional Studies; IA = Immuno Assays; IP = Immuno Precipitation; W = Western blot

Dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:50.

- IA: monoclonal antibody 4H5 can be used both as coating and as detector.

**General Information**

**Description** 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, rBPI21, was shown to confer a survival advantage against invasive pneumococcal disease by binding to the gram-positive bacterial pathogen, pneumolysin. The monoclonal antibody 4H5 recognizes only free BPI and does not interact with BPI that has formed a complex with LPS.

**Aliases** Bactericidal Permeability Increasing Protein

**Storage&stability** Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least one year.

**Precautions** 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 from the use or derivation of this product.

We hereby certify that the above-stated information is correct and that this product has been successfully tested by the Quality Control Department. This product was released for sale according to the existing specifications. This document has been produced electronically and is valid without a signature.

Approved by Manager of QC  
Brenda Teunissen

Date  
29/11/2019

Do you have any questions or comments regarding this product? Please contact us via [support@hycultbiotech.com](mailto:support@hycultbiotech.com).