

**CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET**

<b>Product name</b>	Defensin 5, Human, clone 8C8		
<b>Catalog number</b>	HM2228		
<b>Lot number</b>	-	<b>Expiry date</b>	-
<b>Volume</b>	1 ml	<b>Amount</b>	100 µg
<b>Formulation</b>	0.2 µm filtered in PBS+0.1%BSA+0.02%NaN3	<b>Concentration</b>	100 µg/ml
<b>Host Species</b>	Mouse IgG2b	<b>Conjugate</b>	None
<b>Endotoxin</b>	N.A.	<b>Purification</b>	Protein G
<b>Storage</b>	4°C		

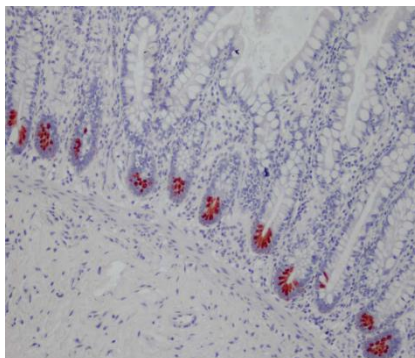
**Application notes**

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #		2,4	4			2		2
Yes		•	•			•		•
No								
N.D.	•			•	•		•	

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



W: Western blot with HM2228, non-reduced. A band of ~10kDa is shown. The protein used was a recombinant human defensin 5 protein.



IHC-P: Immunohistochemistry with HM2228. Paraffin embedded sections of healthy human ileum. The concentration of HM2228 is 1 µg/ml.

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: the antibody can be used as detection antibody.
- W: Non-reduced sample treatment. The expected band size for defensin 5 is approximately 10 kDa.

**General Information**
**Description**

The monoclonal antibody 8C8 recognizes human alpha-defensin 5 (HD5). HD5 is an antimicrobial peptide produced by Paneth cells, specialized epithelial cells of the small intestinal crypt. HD5 is stored in the Paneth cells as propeptide (aa 20-94) and released as mature peptide after trypsin digestion, which is co-secreted from the Paneth cell granules. The mature HD5 (aa 63-94) is protected from further digestion by the proteolysis enzyme. HD5 functions in maintaining the correct microbial balance in the intestine. Transgenic mice that express HD5 are protected from lethal challenge caused by *Salmonella typhimurium*. Expression levels of HD5 are negatively correlated to intestinal infection. HD5 is a useful marker for intestinal metaplasia of the upper gastrointestinal tract. HD5 expression has also been detected in the upper half of the stratified squamous epithelium of the vagina and ectocervix with increasing intensity toward the lumen. Secreted HD5 is detectable in cervicovaginal lavages, with highest concentrations during the secretory phase of the menstrual cycle. The monoclonal antibody 8C8 was raised against recombinant HD5 (aa 20-94) and recognizes the propeptide and the partially processed forms (aa 36-94 and 56-94), but it hardly recognizes mature peptide. No cross reactivity with HD6, lysozyme, or sPLA2 could be detected

**Immunogen**

Recombinant ProHD5 (purified from baculovirus infected Hi5 insect cells)

<b>Aliases</b>	Defensin, alpha 5, HD5
<b>Gene</b>	Gene name: DEFA5, DEF5
<b>References</b>	<ol style="list-style-type: none"> <li>1. Kelly, P et al; Paneth cell granule depletion in the human small intestine under infective and nutritional stress. Clin Exp Immunol 2004, <i>135</i>: 303</li> <li>2. Shen, B et al; Human defensin 5 expression in intestinal metaplasia of the upper gastrointestinal tract. J Clin Pathol 2005, <i>58</i>: 687</li> <li>3. Kelly, P et al; Reduced gene expression of intestinal alpha-defensins predicts diarrhea in a cohort of African adults. J Inf Dis 2006, <i>193</i>: 1464</li> <li>4. Wehkamp, J et al; Paneth cell antimicrobial peptides: Topographical distribution and quantification in human gastrointestinal tissues. FEBS Letters 2006, <i>580</i>: 5344</li> </ol>
<b>Storage&amp;stability</b>	Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least 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 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  
Robbert Zwinkels

Date  
19/03/2018

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