

**CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET**

<b>Product name</b>	Calprotectin, Human, Recombinant		
<b>Catalog number</b>	HC2120		
<b>Lot number</b>	-	<b>Expiry date</b>	-
<b>Volume</b>	Reconstitute with 0.5 ml distilled/de-ionized water	<b>Activity</b>	N.A.
<b>Formulation</b>	Lyophilized in 74mM Tris-HCl+104mM NaCl, pH7.4	<b>Amount</b>	>50 µg
<b>Host Species</b>	Human	<b>Concentration</b>	N.A.
<b>Endotoxin</b>	<24 EU/mg	<b>Purification</b>	N.A.
<b>Storage</b>	4°C	<b>Purity</b>	>95%

**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

- FS: Inhibition of bacterial growth – Test method is inhibition of *S. Aureus*.

**General Information**

<b>Description</b>	Calprotectin, also known as MRP-8/MRP-14 or S100A8/A9 heterocomplex, is formed out of the calcium-binding, migration inhibitory factor-related proteins, MRP-8 (S100A8) and MRP-14 (S100A9). The expression of these proteins is largely confined to the cytosol of neutrophils and monocytes. The complex formation of these proteins is calcium-dependent. Calprotectin comprises 60% of the cytoplasmic protein fraction of circulating polymorphonuclear granulocytes and is also found in monocytes, macrophages and ileal tissue eosinophils. Peripheral blood monocytes carry the antigen extra- and intracellularly, neutrophils only intracellularly. Calprotectin has antibacterial, antifungal, immunomodulating and antiproliferative effects. Furthermore, it is a potent chemotactic factor for neutrophils. Plasma concentrations are elevated in diseases associated with increased neutrophil activity. During intestinal wall inflammation, granulocytes transmigrate through the intestinal wall. Therefore calprotectin is also detectable in faeces. Several investigations report that faecal calprotectin is significantly increased in intestinal diseases such as inflammatory bowel disease (IBD), Crohn's disease, ulcerative colitis and colon cancer. Normal human plasma contains a calprotectin concentration ranging from 500 to 3000 ng/ml.
<b>References</b>	<ol style="list-style-type: none"> <li>1. Hunter, M et al; High level expression and dimer characterization of the S100 EF-hand proteins, migration inhibitory factor-related proteins 8 and 14. <i>J Biol Chem</i> 1998, <i>273</i>: 12427</li> <li>2. Yui, S et al; Implication of extracellular zinc exclusion by recombinant human calprotectin (MRP8 and MRP14) from target cells in its apoptosis-inducing activity. <i>Mediators Inflamm</i> 2002, <i>11</i>: 165</li> <li>3. Corbin, B et al; Metal chelation and inhibition of bacterial growth in tissue abscesses. <i>Science</i> 2008, <i>319</i>: 962</li> </ol>
<b>Storage&amp;stability</b>	Lyophilized product should be stored at 4°C. Store stock solution after reconstitution in aliquots at -70°C. Repeated freeze and thaw cycles cause loss of activity. Under recommended storage conditions, product is stable for at least one year. Use recombinant Calprotectin protein within 2 hours after thawing and keep on ice.
<b>Precautions</b>	Caution: vial is under vacuum. 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  
29/03/2018

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