

Creative Diagnostics Announces Calprotectin Reagents for Inflammatory Disease Research

Creative Diagnostics announces the launch of its new line of Calprotectin Reagents to accelerate research in inflammatory diseases.

SHIRLEY, NEW YORK, USA, April 21, 2023 /EINPresswire.com/ -- [Creative Diagnostics](#), a leading global supplier of raw materials, antibodies, and reagents to the biotechnology industry, is proud to announce the launch of its new line of [Calprotectin Reagents](#) for the study of inflammation disease.

Calprotectin is an abundant inflammatory marker in the neutrophil cytoplasm, accounting for approximately 45% of total cytoplasmic proteins. It is a member of the S100 calcium-binding family and in mammals (e.g. humans and mice) consists of two proteins, S100A8 and S100A9. In humans, S100A8 is composed of 93 amino acids, while S100A9 is made up of 113 amino acids. Calprotectin has antimicrobial properties that are thought to result from its ability to chelate and sequester pathogenic metal ions. Moreover, both subunits, S100A8 and S100A9, exhibit a wide range of intracellular and extracellular immunomodulatory properties. As a damage-associated molecular pattern (DAMP), calprotectin activates Toll-like receptor 4 (TLR4) and thus contributes to the activation of the innate immune response.

The activation of the intestinal immune system leads to the recruitment of innate immune cells, including neutrophils, which release calprotectin upon activation. As the inflammatory process progresses, the released calprotectin is absorbed into the feces before being excreted from the body. Therefore, the amount of fecal calprotectin is proportional to the number of neutrophils in the gastrointestinal mucosa. In addition, fecal calprotectin has been shown to be highly sensitive and specific for differentiating inflammatory bowel disease (IBD) from irritable bowel syndrome (IBS). High levels of calprotectin indicate IBD, while low or normal levels indicate IBS.

In the United States, an estimated 3.1 million adults have been diagnosed with IBD. Currently, fecal calprotectin testing can be utilized to differentiate IBD from IBS and to monitor the severity of IBD. Creative Diagnostics now offers scientists various calprotectin related antibodies and antigens for quantitative sandwich immunoassays as accurate biomarkers for IBD patients, such as Human Calprotectin ELISA, Magic™ Anti-MRP8/MRP14 monoclonal antibody, Native Calprotectin Antigen, and Recombinant S100a9 protein (human, aa 1-114, >90%) [His].

For example, the Human Calprotectin ELISA Kit is intended for the in vitro quantitative

determination of human calprotectin in feces, plasma, serum, sputum and urine samples. This kit is for research use only and is not intended for use in diagnostic or therapeutic procedures. Also, the kit cannot be used to quantify individual MRP-8 (S100A8) or MRP-14 (S100A9) proteins.

Another example is the Recombinant S100a9 protein (human, aa 1-114, >90%) [His], which may be involved in the inhibition of casein kinase. The Recombinant S100A9 protein fused to the C-terminal His-tag is expressed in E. coli and purified by conventional chromatography techniques.

If you want to learn more about Calprotectin Reagents or have any questions regarding research materials, please visit Creative Diagnostics at <https://www.creative-diagnostics.com/>.

About Creative Diagnostics

Creative Diagnostics is a leading manufacturer and supplier of antibodies, viral antigens, innovative diagnostic components, and critical assay reagents. In addition to providing contract R&D and biologic manufacturing services for diagnostic manufacturers along with GMP biologics manufacturing for the biopharmaceutical market, the company aims to continue to act as a trusted source for all researchers' assay development and manufacturing needs.

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