

# Recombinant Human S100A8/S100A9 Complex Protein

**Cat. No.** S100A8/S100A9-10H    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
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| <b>Product Overview</b> | Recombinant Human S100A8/S100A9 fusion Protein was expressed in E. coli.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Description</b>      | <p>S100A8 (also known as MRP8, Calgranulin A, and CP-10) and S100A9 (also known as MRP14 and Calgranulin B) are pro-inflammatory members of the S100 family of secreted calcium binding proteins. They are up-regulated in neutrophils and monocytes at sites of inflammation (e.g. psoriasis, rheumatoid arthritis, cardiac ischemia) and are present at elevated concentrations in rheumatoid arthritis synovial fluid. The 10 kDa human S100A8 and 14 kDa S100A9 each contain two EF-hand calcium binding motifs. Human S100A8 shares 57% and 61% amino acid (aa) sequence identity with mouse and rat S100A8, respectively. Human S100A9 shares 57% and 62% amino acid sequence identity with mouse and rat S100A9, respectively. In the presence of calcium or zinc, S100A8 and S100A9 associate into non-covalent homodimers and 34-35 kDa heterodimers with each other. The heterodimer additionally binds and sequesters manganese, thereby restricting the growth of Mn-dependent bacteria. The S100A8/A9 heterodimer exhibits functions beyond those performed by the individual proteins. These include binding to fatty acids such as arachidonic acid and promoting astrocyte proliferation. S100A8, S100A9, and the heterodimer each promote neutrophil infiltration into sites of inflammation and inflammatory cytokine production by monocytes.</p> |

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|                    |                                                                                                                   |
|--------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Form</b>        | Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide.                                          |
| <b>AA Sequence</b> | Met1-Glu93 (S100A8) & Thr2-Pro114 (S100A9)                                                                        |
| <b>Purity</b>      | Protein A or G purified from hybridoma culture supernatant.                                                       |
| <b>Storage</b>     | 12 months from date of receipt, 2 to 8 centigrade as supplied.                                                    |
| <b>Shipping</b>    | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |

## GENE INFORMATION

|                        |                                                                                                                                                       |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | S100A8 S100 calcium binding protein A8 [ Homo sapiens (human) ]&S100A9 S100 calcium binding protein A9 [ Homo sapiens (human) ]                       |
| <b>Official Symbol</b> | S100A8&S100A9                                                                                                                                         |
| <b>Synonyms</b>        | P8; MIF; NIF; CAGA; CFAG; CGLA; L1Ag; MRP8; CP-10; MA387; 60B8AG; S100-A8&MIF; NIF; P14; CAGB; CFAG; CGLB; L1AG; LIAG; MRP14; 60B8AG; MAC387; S100-A9 |
| <b>Gene ID</b>         | 6279&6280                                                                                                                                             |
| <b>mRNA Refseq</b>     | NM_002964.5&NM_002965.4                                                                                                                               |
| <b>Protein Refseq</b>  | NP_002955.2&NP_002956.1                                                                                                                               |
| <b>MIM</b>             | 123885&123886                                                                                                                                         |
| <b>UniProt ID</b>      | P05109&P06702                                                                                                                                         |

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