

**DESCRIPTION**

<b>Source</b>	<i>E. coli</i> -derived Ser2-Gln101 with an N-terminal Met Accession # AAH34687
<b>N-terminal Sequence Analysis</b>	Ser2 (Major) & Met1 (Minor)
<b>Structure / Form</b>	Noncovalently-linked homodimer
<b>Predicted Molecular Mass</b>	11 kDa

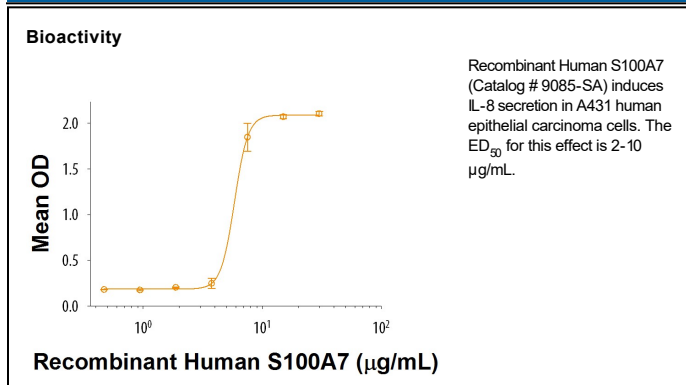
**SPECIFICATIONS**

<b>SDS-PAGE</b>	11 kDa, reducing conditions
<b>Activity</b>	Measured by its ability to induce IL-8 secretion in A431 human epithelial carcinoma cells. The ED <sub>50</sub> for this effect is 2-10 µg/mL.
<b>Endotoxin Level</b>	<0.10 EU per 1 µg of the protein by the LAL method.
<b>Purity</b>	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

<b>Reconstitution</b>	Reconstitute at 500 µg/mL in PBS.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> <li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li> <li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li> <li>● 3 months, -20 to -70 °C under sterile conditions after reconstitution.</li> </ul>

**DATA**



**BACKGROUND**

S100A7, also known as Psoriasin, is a 11-12 kDa member of the S100 family of EF hand calcium binding proteins (1). Human S100A7 shares 32% amino acid sequence identity with mouse S100A7A, the closest related protein in mouse (2). It is acetylated at the N-terminus and binds both calcium and zinc ions (3, 4). S100A7 is up-regulated in keratinocytes of psoriasis and atopic dermatitis lesions (5-9), as well as in epithelial cells of the tongue, eye, and female genital tract (10-12). Its up-regulation can be induced by bacterial exposure, inflammatory cytokines, or epidermal barrier disruption (3, 9, 11, 12). S100A7 supports epithelial integrity through killing *E. coli* by sequestration of zinc (3, 5) and through inducing the up-regulation of tight junction proteins (13). The interaction of S100A7 with RAGE promotes the migration of immune cells and the infiltration of macrophages into tumor sites (7, 14).

**References:**

1. Donato, R. *et al.* (2013) *Curr. Mol. Med.* **13**:24.
2. Madsen, P. *et al.* (1991) *J. Invest. Dermatol.* **97**:701.
3. Glaser, R. *et al.* (2005) *Nat. Immunol.* **6**:57.
4. Brodersen, D.E. *et al.* (1999) *Biochemistry* **38**:1695.
5. Lee, K.C. and R.L. Eckert (2007) *J. Invest. Dermatol.* **127**:945.
6. Anderson, K.S. *et al.* (2009) *Br. J. Dermatol.* **160**:325.
7. Wolf, R. *et al.* (2008) *J. Immunol.* **181**:1499.
8. Al-Haddad, S. *et al.* (1999) *Am. J. Pathol.* **155**:2057.
9. Glaser, R. *et al.* (2009) *J. Invest. Dermatol.* **129**:641.
10. Meyer, J.E. *et al.* (2008) *Mucosal Immunol.* **1**:239.
11. Garreis, F. *et al.* (2011) *Invest. Ophthalmol. Vis. Sci.* **52**:4914.
12. Mildner, M. *et al.* (2010) *Mucosal Immunol.* **3**:602.
13. Hattori, F. *et al.* (2014) *Br. J. Dermatol.* **171**:742.
14. Nasser, M.W. *et al.* (2015) *Cancer Res.* **75**:974.