

## Recombinant Human S100A3/S100E Protein (His &MBP Tag)

**Catalog Number:** PKSH031248

**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

### Description

<b>Species</b>	Human
<b>Source</b>	E.coli-derived Human S100A3/S100E protein Met 1-Gln 101, with an N-terminal His & MBP
<b>Calculated MW</b>	55.3 kDa
<b>Observed MW</b>	50 kDa
<b>Accession</b>	P33764
<b>Bio-activity</b>	Not validated for activity

### Properties

<b>Purity</b>	> 95 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	Please contact us for more information.
<b>Storage</b>	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from sterile PBS, 20% glycerol, pH 7.4 Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
<b>Reconstitution</b>	Please refer to the printed manual for detailed information.

### Data



> 95 % as determined by reducing SDS-PAGE.

### Background

#### For Research Use Only

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Protein S100-A3, also known as Protein S-100E, S100 calcium-binding protein A3, S100A3 and S100E, is a member of the S-100 family. S100A3 / S100E contains 2EF-hand domains. S100A3 / S100E is highly expressed in the differentiating cuticular cells within the hair follicle and organized into mature hair cuticles. High concentrations of S100A3 homotetramer might provide the millimolar level of Ca<sup>2+</sup> required for hair cuticular barrier formation. S100A3 / S100E is a unique member of the Ca<sup>2+</sup>-binding S100 protein family with the highest cysteine content and affinity for Zn<sup>2+</sup>. S100A3 / S100E binds both calcium and zinc. S100A3 / S100E probably binds 2 zinc ions per molecule. It may be involved in calcium-dependent cuticle cell differentiation and hair shaft formation. S100A3 plays an important role in calcium-dependent processes leading to hair shaft formation. S100A3 / S100E is a unique protein among all members of the calcium-binding S100 family, is specifically expressed at the inner endocuticle of human hair fibers. Upon hair damage, S100A3 / S100E is released from hair fibers and possibly destabilizes the hair tissue architecture.

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