Recombinant Human S100A11 Protein

Catalog Number: PKSH033550

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

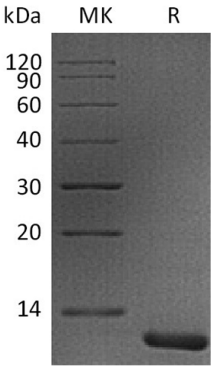
Description

Species	Human
Source	E.coli-derived Human S100A11 protein Met1-Thr105
Calculated MW	11.7 kDa
Observed MW	12 kDa
Accession	P31949
Bio-activity	Not validated for activity

Properties

Purity	> 95 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per μg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 ℃. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, 1mM DTT, 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.
Reconstitution	Please refer to the printed manual for detailed information.

Data



> 95 % as determined by reducing SDS-PAGE.

Background

S100A11 is a member of the S100 family of calcium binding proteins. Human S100A11 contains two EF hand motifs and shares 82% amino acid sequence identity with mouse and rat S100A11. It forms covalent homodimers upon transglutamination and also disulfide-linked tetramers. S100A11 is secreted by keratinocytes and can be crosslinked into the cornified envelope of the skin. Dimerization enhances its ability to signal through RAGE on keratinocytes, induce the production of EGF family proteins, and induce cell proliferation. Dimerization also enables S100A11 to bind RAGE on chondrocytes, leading to chondrocyte hypertrophy and catabolism of the cartilage matrix. S100A11 is additionally found in the cytosol where it becomes phosphorylated and translocates to the nucleus in response to DNA damage, RELM alpha exposure, or elevated extracellular calcium concentrations. Calcium also promotes S100A11 association with S100B as well as Annexins A1, A2, and A6. S100A11-Annexin A2 complexes are recruited to sites of plasma membrane damage where they facilitate membrane repair in migrating cancer cells. S100A11 is upregulated in various cancers and supports tumor cell proliferation, invasion, and migration. In addition, S100A11 is produced in the ovary, and it acts on cumulus cells to inhibit oocyte fertilization.

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