Data Sheet (Cat.No.TMPY-01824)

TargetMol

Caspase-14 Protein, Human, Recombinant (His)

General Information

Synonyms: caspase 14, apoptosis-related cysteine peptidase;ARCI12

Protein Construction: Ser2-Gln242

Species: Human

Expression Host: E. coli

Accession: P31944

Molecular Weight: 28.7 kDa (Predicted); 31 kDa (Reducing conditions)

QC Testing

Biological Activity: Activity has not been tested. It is theoretically active, but we cannot guarantee it.

Purity: > 95% as determined by SDS-PAGE.

Endotoxin: < 1.0 EU/μg of the protein as determined by the LAL method.

Formulation: Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Shipping:

In general, Lyophilized powders are shipping with blue ice.

Protein Background

Caspase 14 (CASP14) is an enzyme that belongs to the peptidase C14A family. The Caspase 14 protein is complexed of unprocessed caspase-14 and processed 19 kDa (p19) and 10 kDa (p10) subunits. Sequential activation of caspases plays a central role in the execution-phase of cell apoptosis. Caspases exist as inactive proenzymes, which undergo proteolytic processing at conserved aspartic residues to produce two subunits, large and small, that dimerize to form the active enzyme. CASP14 has been shown to be processed and activated by Caspase 8 and Caspase 10 in vitro, and by anti-Fas agonist antibody or TNF-related apoptosis inducing ligand in vivo. The expression and processing of this caspase may be involved in keratinocyte terminal differentiation,

which is important for the formation of the skin barrier. It is believed to be a non-apoptotic caspase which is involved in epidermal differentiation, keratinocyte differentiation and cornification. CASP14 probably regulates maturation of the epidermis by proteolytically processing filaggrin.

Reference

Hu SM, et al. (1998) Caspase-14 is a novel developmentally regulated protease. The journal of biological chemistry. 273: 29648-53.

Marc Van De Craen, et al. (1998) Identification of a new caspase homologue: caspase-14. Cell death differ. 5(10): 838-46.