Data Sheet (Cat.No.TMPY-03889)

TargetMol

STC2 Protein, Human, Recombinant (His)

General Information

Synonyms:	stanniocalcin 2;STC-2;STCRP
Protein Construction:	A DNA sequence encoding the human STC2 (O76061) (Met1-Arg302) was expressed with a C-terminal polyhistidine tag. Predicted N terminal: Thr 25
Species:	Human
Expression Host:	HEK293 Cells
Accession:	O76061
Molecular Weight:	32.1 kDa (predicted); 35-42 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
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 solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

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.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

STC2 is a secreted, homodimeric glycoprotein expressed in a wide variety of tissues. STC2 has an anti-hypocalcemic action on calcium and phosphate homeostasis. It may have autocrine or paracrine functions. Its C-terminus contains a cluster of histidine residues that may interact with metal ions. STC2 has 10 of its 15 cysteine residues conserved among stanniocalcin family members and is phosphorylated by casein kinase 2 exclusively on its serine residues. It may play a role in the regulation of renal and intestinal calcium and phosphate transport, cell

metabolism, or cellular calcium/phosphate homeostasis.

Reference

Chang AC, et al. (1998) Identification of a second stanniocalcin cDNA in mouse and human: stanniocalcin 2. Mol Cell Endocrinol. 141(1-2):95-9.
Ishibashi K, et al. (1998) Molecular cloning of a second human stanniocalcin homologue (STC2). Biochem Biophys Res Commun. 250(2):252-8.
uo CW, et al. (2005) Identification of a stanniocalcin paralog, stanniocalcin-2, in fish and the paracrine actions of stanniocalcin-2 in the mammalian ovary. Endocrinology. 146(1):469-76.