

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived Thr25-Arg302, with a C-terminal 6-His tag Accession # O76061
N-terminal Sequence Analysis	Thr25
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	31 kDa

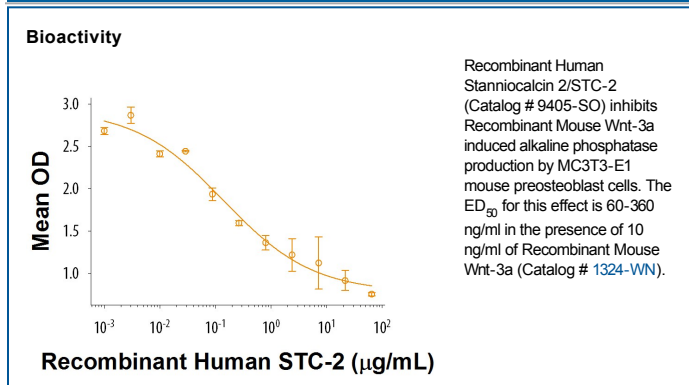
SPECIFICATIONS

SDS-PAGE	34-43 kDa, reducing conditions
Activity	Measured by its ability to inhibit Wnt-3a-induced alkaline phosphatase production by MC3T3-E1 mouse preosteoblast cells. The ED ₅₀ for this effect is 60-360 ng/mL in the presence of 10 ng/mL of Recombinant Mouse Wnt-3a (Catalog # 1324-WN).
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

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

DATA



BACKGROUND

Stanniocalcin 2 (STC-2) is a secreted disulfide-linked homodimeric glycoprotein hormone that is related to the STC protein first discovered from corpuscles of stannius in fish (1). The STC-2 has 10 of its 15 cysteine residues conserved among stanniocalcin family members and is phosphorylated by casein kinase 2 exclusively on its serine residues (2). Its C-terminus contains a cluster of histidine residues which may interact with metal ions (1). STC-2 is expressed in a wide variety of tissues. In the ovary, STC-2 has been shown to be a paracrine hormone that regulates granulosa cell function (1). The amino acid sequence of human mature STC-2 is 36% identical to that of human STC-1. It is also 99% and 88% identical to that of monkey and mouse STC-2, respectively (3). STC-2 enhances mesenchymal stem cell survival (4), promotes cell proliferation in cervical cancer (5), suppresses breast cancer cell migration and invasion (6), promotes osteoblast differentiation (7), and inhibits longitudinal bone growth directly at the growth plate (8). It is also a biomarker for cervical and lung cancers (9, 10).

References:

1. Luo, C. *et al.* (2005). *Endocrinology* **146**:469.
2. Tagliabracci, V. S. *et al.* (2015). *Cell* **161**:1619.
3. Ishibashi, K. *et al.* (1998). *Biochem. Biophys. Res. Commun.* **250**:252.
4. Kim PH, *et al.* (2015) *BMB Rep.* **48**:702.
5. Wang Y, *et al.* (2015) *Biochem Biophys Res Commun.* **466**:362.
6. Hou J, *et al.* (2015) *PLoS One.* **10**:e0122179.
7. Zhou J, *et al.* (2016) *Mol Med Rep.* **14**:5653.
8. Wu S, *et al.* (2006) *J Biol Chem.* **281**: 5120.
9. Shen XJ, *et al.* (2014) *Int J Clin Exp Pathol.* **7**: 8770.
10. Na SS, *et al.* (2015) *Biochim Biophys Acta.* **1854**:668.