



## Product Information

Product ID S7970

CAS No. 135459-87-9

Chemical Name

Synonym

Formula  $C_{12}H_6N_2O_8S \cdot Sr_2$

Formula Wt. 513.49

Melting Point

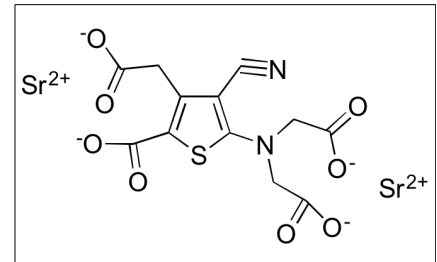
Purity  $\geq 98\%$

Solubility

Store Temp Ambient

Ship Temp Ambient

**Description** Strontium ranelate (SR) prevents deterioration of bone tissue microarchitecture in osteoporosis. When used clinically to prevent osteoporosis, SR stimulates pre-osteoblast replication and decreases osteoclast activity, increasing the ultimate load of intact bones, making them stiffer, harder, and tougher. In vitro, SR inhibited activation of NF- $\kappa$ B, promoting osteoblast differentiation and suppressing osteoclast formation. In other cellular models, SR stimulates phosphorylation of ERK and increases expression of osteocalcin and bone morphogenetic protein 2 (BMP2), potentially through activation of calcium-sensing receptor CaR.



**Bulk quantities available upon request**

Product ID	Size
S7970	100 mg
S7970	1 g
S7970	5 g

**References** Cattani-Lorente M, Rizzoli R, Ammann P. In vitro bone exposure to strontium improves bone material level properties. *Acta Biomater.* 2013 Jun;9(6):7005-13. PMID: 23454213.

Rodríguez J, Escudero ND, Mandalunis PM. Effect of strontium ranelate on bone remodeling. *Acta Odontol Latinoam.* 2012;25(2):208-13. PMID: 23230643.

Yamaguchi M, Weitzmann MN. The intact strontium ranelate complex stimulates osteoblastogenesis and suppresses osteoclastogenesis by antagonizing NF- $\kappa$ B activation. *Mol Cell Biochem.* 2012 Jan;359(1-2):399-407. PMID: 21874315.

Takaoka S, Yamaguchi T, Yano S, et al. The Calcium-sensing Receptor (CaR) is involved in strontium ranelate-induced osteoblast differentiation and mineralization. *Horm Metab Res.* 2010 Aug;42(9):627-31. PMID: 20560105.

**Caution:** This product is intended for laboratory and research use only. It is not for human or drug use.