**Product Specification Sheet**

**Product Name:** Strontium ranelate

**Catalog Number:** C7876

### Technical information:

- **Chemical Formula:** C_{12}H_{6}N_{2}O_{8}SSr_{2}
- **CAS #:** 135459-87-9
- **Molecular Weight:** 513.49
- **Purity:** > 98%
- **Appearance:** White solid
- **Solubility:** Soluble in DMSO up to 22 mM
- **Chemical Name:** 5-[Bis(carboxymethyl)amino]-2-carboxy-4-cyano-3-thiopheneacetic Acid Strontium Salt
- **Storage:** Store solid powder at 4°C desiccated; Store DMSO solution at -20°C.
- **Shelf Life:** In the unopened package, powder is stable for 1 year and DMSO solution is stable for 6 months under proper storage condition.

### Handling:

- To make 10 mM stock solution, add 0.195mL of DMSO for each mg of Strontium ranelate.
- For DMSO solution, briefly spin the vial at 500 rpm in a 50 mL conical tube to ensure maximum sample recovery.

### Biological Activity:

Strontium ranelate (Protelos), a strontium (II) salt of ranelic acid, is an agent for the treatment of osteoarthritis and osteoporosis. Classified as a dual-action bone agent (DABA), strontium ranelate is unique in that it can simultaneously inhibit bone resorption and stimulate bone formation. [1]

More specifically, strontium ranelate increases in vitro osteoblast differentiation from progenitors, as well as osteoblast-induced osteoclastogenesis both in vitro and in vivo. Regarding bone-antiresorbing mechanisms, strontium ranelate decreases osteoclast differentiation and activity, while increasing their apoptosis. [2]

### Reference:

1. Ireland, G., Protos: The first dual-action bone agent for osteoporosis, JEMDSA, 2006, 11(1), 35.

**To reorder:** [http://www.cellagentech.com/Strontium-ranelate/](http://www.cellagentech.com/Strontium-ranelate/)

**For Technical Support:** [technical@cellagentech.com](mailto:technical@cellagentech.com)

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