

## Product datasheet for **RC209350**

### Cystatin SA (CST2) (NM\_001322) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Cystatin SA (CST2) (NM\_001322) Human Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** Cystatin SA  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >RC209350 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGGCCTGGCCCTGTGCACCCTGCTGCTCCTGCTGGCCACCCAGGCTGTGGCCCTGGCCTGGAGCCCC  
 AGGAGGAGGACAGGATAATCGAGGGTGGCATCTATGATGCAGACCTCAATGATGAGCGGGTACAGCGTGC  
 CCTTCACTTTGTCATCAGCGAGTATAACAAGGCCACTGAAGATGAGTACTACAGACGCCTGCTGCGGGT  
 CTACGAGCCAGGGAGCAGATCGTGGCGGGTGAATTACTTCTTCGACATAGAGGTGGCCGAACCATAT  
 GTACCAAGTCCCAGCCCAACTTGGACACCTGTGCCTTCCATGAACAGCCAGAAGTGCAGAAGAAACAGTT  
 GTGCTCTTTCCAGATCTACGAAGTTCCTGGGAGGACAGAATGTCCTGGTGAATTCAGGTGTCAAGAA  
 GCC

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:** >RC209350 protein sequence  
 Red=Cloning site Green=Tags(s)

MAWPLCTLLLLLATQAVALLAWSPQEEDRIIEGGIYDADLNDERVQRALHFVISEYNKATEDEYYRRLLRV  
 LRAREQIVGGVNYFFDIEVGRITCKSQPNLDTCAFHEQPELQKKQLCSFQIYEVWPEDRMSLVNSRCQE  
 A

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mk6242\\_g05.zip](https://cdn.origene.com/chromatograms/mk6242_g05.zip)

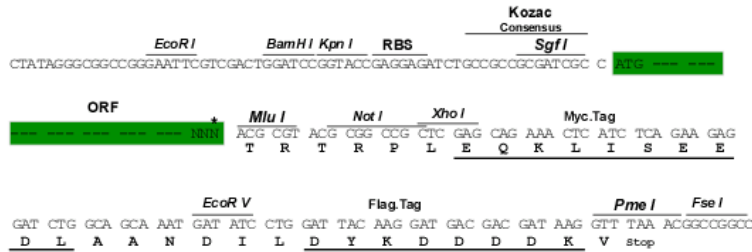
**Restriction Sites:** SgfI-MluI



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**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



\* The last codon before the Stop codon of the ORF

**ACCN:** NM\_001322

**ORF Size:** 423 bp

**OTI Disclaimer:** The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)
**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

**Reconstitution Method:**

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

**RefSeq:** [NM\\_001322.3](#)
**RefSeq Size:** 694 bp

**RefSeq ORF:** 426 bp

**Locus ID:** 1470

UniProt ID: [P09228](#)

Cytogenetics: 20p11.21

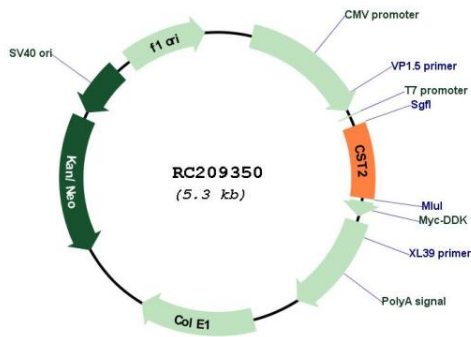
Domains: CY

Protein Families: Secreted Protein

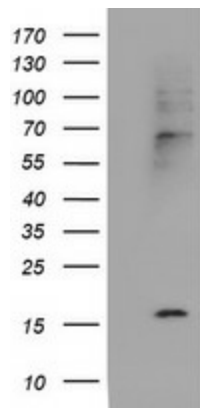
MW: 16.4 kDa

**Gene Summary:** The cystatin superfamily encompasses proteins that contain multiple cystatin-like sequences. Some of the members are active cysteine protease inhibitors, while others have lost or perhaps never acquired this inhibitory activity. There are three inhibitory families in the superfamily, including the type 1 cystatins (stefins), type 2 cystatins and the kininogens. The type 2 cystatin proteins are a class of cysteine proteinase inhibitors found in a variety of human fluids and secretions, where they appear to provide protective functions. The cystatin locus on chromosome 20 contains the majority of the type 2 cystatin genes and pseudogenes. This gene is located in the cystatin locus and encodes a secreted thiol protease inhibitor found at high levels in saliva, tears and seminal plasma. [provided by RefSeq, Jul 2008]

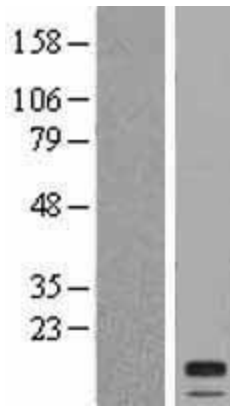
**Product images:**



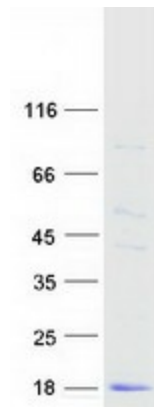
Circular map for RC209350



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY CST2 (Cat# RC209350, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-CST2 (Cat# [TA504259]). Positive lysates [LY420010] (100ug) and [LC420010] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY420010]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC209350 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified CST2 protein (Cat# [TP309350]). The protein was produced from HEK293T cells transfected with CST2 cDNA clone (Cat# RC209350) using MegaTran 2.0 (Cat# [TT210002]).