

PRODUCT INFORMATION



Cystatin C (human, recombinant)

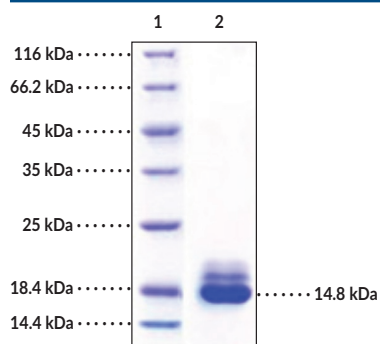
Item No. 31836

Overview and Properties

Synonyms: ARMD11, CYS3, Cystatin 3
Source: Active recombinant human C-terminal His-tagged cystatin C expressed in HEK293 cells
Amino Acids: 27-146
Uniprot No.: P01034
Molecular Weight: 14.8 kDa
Storage: -80°C (as supplied)
Stability: ≥1 year
Purity: ≥95% estimated by SDS-PAGE
Supplied in: Lyophilized from sterile PBS, pH 7.4
Endotoxin Testing: <1.0 EU/μg, determined by the LAL endotoxin assay
Specific Activity: Measured by its ability to inhibit papain cleavage of a fluorogenic peptide substrate Z-FR-AMC. The IC₅₀ value is <12 nM.

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Lane 1: MW Markers
Lane 2: Cystatin C

SDS-PAGE Analysis of Cystatin C. This protein has a calculated molecular weight of 14.8 kDa.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

Cystatin C, also known as cystatin 3, is a member of the cystatin superfamily of cysteine protease inhibitors encoded by *CST3* in humans.¹ It is a 120-amino acid peptide constitutively produced by all nucleated cells and, following signal peptide cleavage, is secreted in all tissues and body fluids.¹⁻³ Cystatin C is an inhibitor of endogenous cysteine proteases, including cathepsins B, H, and L, as well as lysosomal proteinases, that regulates extracellular matrix (ECM) production and degradation.¹ Due to the small size and basic pI of cystatin C, it is not freely filtered by the glomerulus and is reabsorbed by, and catabolized in, tubular epithelial cells, which facilitates its use as a biomarker of glomerular filtration rate (GFR). Serum and urine levels of cystatin C are increased in pediatric acute kidney injury patients.³ Cayman's Cystatin C (human, recombinant) protein can be used for enzyme activity assay applications. This protein consists of 131 amino acids and has a calculated molecular weight of 14.8 kDa.

References

1. Newman, D.J. Cystatin C. *Ann. Clin. Biochem.* **39(2)**, 89-104 (2002).
2. Sarkar, P.D., Rajeshwari, G., and Shivaprakash, T.M. Cystatin C-A novel marker of glomerular filtration rate: A review. *Indian J. Clin. Biochem.* **20(1)**, 139-144 (2005).
3. Nakhjavan-Shahraki, B., Yousefifard, M., Ataei, N., et al. Accuracy of cystatin C in prediction of acute kidney injury in children; serum or urine levels: which one works better? A systematic review and meta-analysis. *BMC Nephrol.* **18(1)**, 120 (2017).

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