
Product Data Sheet

Product Name: CAPNS1 Human
 Cat. No.: GP22970
 Batch No.: 1

Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	Calpain Small Subunit 1; CAPN4; Calcium-Activated Neutral Proteinase Small Subunit; Calcium-Dependent Protease Small Subunit 1; Calpain Regulatory Subunit; CANP Small Subunit; CDPS; CSS1; Calcium-Dependent Protease Small Subunit; Calcium-Dependent Protease Small Subunit; Calpain 4 Small Subunit (30K); Calpain Small Polypeptide; Calpain Small Subunit 1; CALPAIN4; CANPS; CAPNS; CANP; CAPNS1.		
Amino Acid Sequence	MGSSHHHHHH SGLVPRGSH MGSRTHYSNI EANESSEVRQ FRRLFAQLAG DDMEVSATEL MNILNKVVTR HPDLKTDGFG IDTCRSMVAV MDSDTTGKLG FEEFKYLWNN IKRWQAIYKQ FDTDRSGTIC SSELPGAFAE AGFHLNEHLY NMIIRRYSD E SGNMDFDNFI SCLVRLDAMF RAFKSLDKDG TGQIQVNIQE WLQLTMY S.		
Formulation	The CAPNS1 solution (0.5mg/ml) contains 20mM Tris-HCl buffer (pH 8.0), 0.15M NaCl, 20% glycerol and 1mM DTT.		

Introduction

Calpain, Small Subunit 1 (CAPNS1) belongs to the calpain small subunit family. Calpains are a ubiquitous, well-conserved family of calcium-dependent, cysteine proteases, widely distributed in mammalian cells. Calpain families are implicated in neurodegenerative processes, considering that their activation can be triggered by calcium influx and oxidative stress. Calpains function as heterodimers, comprising a specific large catalytic subunit (calpain 1 subunit in Calpain I, and calpain 2 subunit in Calpain II), and a common small regulatory subunit encoded by the CAPNS1 gene. The CAPNS1 protein is vital for the stability and function of both calpain heterodimers, whose proteolytic activities influence numerous cellular functions including apoptosis, proliferation, migration, adhesion, and autophagy.

Caution: Product has not been fully validated for medical applications. For research use only.

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Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

Background

CAPNS1 Human Recombinant produced in E.coli is a single, non-glycosylated polypeptide chain containing 208 amino acids (84-268) and having a molecular mass of 23.8 kDa. CAPNS1 is fused to a 23 amino acid His-tag at N-terminus & purified by proprietary chromatographic techniques.

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