[KD Validated] Anti-CAPNS1 Rabbit mAb

Purified Recombinant Rabbit Monoclonal Antibody

Catalog # R021610

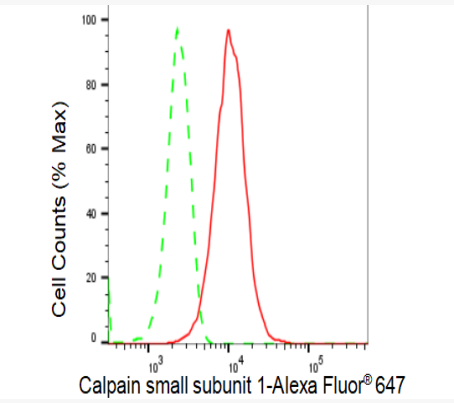
Product Information

Application	WB, FC, IF (Cell)/ICC
Reactivity	Human
Dilution	WB 1:1,000~1:5,000; FC 1:200~1:2,000; IF 1:100~1:1,000
Host	Rabbit
Clonality	Monoclonal
Clone No.	93J01P44
Isotype	IgG
Label	Unconjugated
Immunogen	A synthesized peptide derived from human Calpain small subunit 1
Format	Affinity purified monoclonal antibody supplied in PBS with 0.02% sodium azide and 50% glycerol, pH 7.3.
Storage	Shipped on wet ice. Store at -20°C. Stable for 12 months from date of receipt. Aliquoting is unnecessary for -20°C storage.
Precautions	[KD Validated] Anti-CAPNS1 Rabbit mAb [93J01P44] is for research use only and not for use in diagnostic or therapeutic procedures.

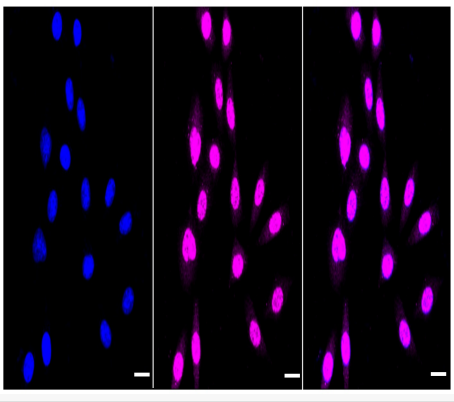
Protein Information

Synonyms	CAPNS1; Calpain Small Subunit 1; CDPS; CANPS; CAPN4; CANP; Calcium-Activated Neutral Proteinase Small Subunit; Calcium-Dependent Protease Small Subunit 1; Calpain Regulatory Subunit; CANP Small Subunit; CSS1; 30K; Epididymis Secretory Sperm Binding Protein; Calcium-Dependent Protease, Small Subunit; Calcium-Dependent Protease Small Subunit; Calpain 4, Small Subunit (30K); Calpain, Small Polypeptide; CALPAIN4; CAPNS.
Calculated MW	Calculated MW: 28 kDa, Observed MW: 28 kDa
Uniprot ID	P04632
Gene ID	826
Background	This gene is a member of the calpain small subunit family. Calpains are calcium-dependent cysteine proteinases that are widely distributed in mammalian cells. Calpains operate 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 this gene. This encoded protein is essential for the stability and function of both calpain heterodimers, whose proteolytic activities influence various cellular functions including apoptosis, proliferation, migration, adhesion, and autophagy. Calpains have been implicated in neurodegenerative processes, such as myotonic dystrophy. A pseudogene of this gene has been defined on chromosome 1. Alternative splicing results in multiple transcript variants.

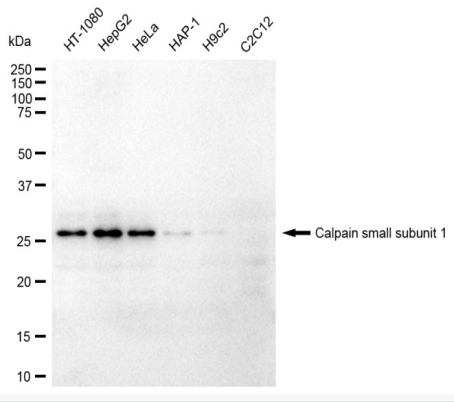
Validation Images



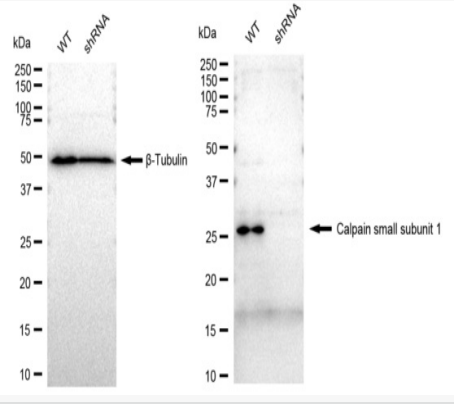
Flow cytometric analysis of Calpain small subunit 1 expression in HepG2 cells using Calpain small subunit 1 antibody (R021610, 1:2,000). Green, isotype control; red, Calpain small subunit 1.



Immunocytochemical staining of HepG2 cells with Calpain small subunit 1 antibody (R021610, 1:1,000). Nuclei were stained blue with DAPI; Calpain small subunit 1 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar: 20 µm.



Western blotting analysis using Calpain small subunit 1 antibody (R021610). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with Calpain small subunit 1 antibody (R021610, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (1:20,000) respectively. Image was developed using ECL Substrate Kit.



Western blotting analysis using Calpain small subunit 1 antibody (R021610). Calpain small subunit 1 expression in wild type (WT) and Calpain small subunit 1 shRNA knockdown (KD) HeLa cells with 30 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with Calpain small subunit 1 antibody (R021610, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody (1:20,000) respectively. Image was developed using ECL Substrate Kit.