

Active Recombinant Human CAPN3 Protein, His-tagged

Cat. No. CAPN3-22H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human CAPN3 Protein is produced by E.coli expression system with a His tag at the N-terminal.
Species	Human
Source	E.coli
ProteinLength	Ile602-Ala821
Description	Calpain 3 is a calcium-dependent cysteine protease mainly expressed in skeletal muscle. In humans, calpain 3 is encoded by the CAPN3 gene. This gene encodes a muscle-specific member of the calpain large subunit family that specifically binds to titin. Mutations in this gene are associated with limb-girdle muscular dystrophies type 2A. Alternate promoters and alternative splicing result in multiple transcript variants encoding different isoforms and some variants are ubiquitously expressed. Besides, Titin (TTN) has been identified as an interactor of CAPN3, thus a binding ELISA assay was conducted to detect the interaction of recombinant human CAPN3 and recombinant human TTN. Briefly, CAPN3 were diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100uL were then transferred to TTN-coated microtiter wells and incubated for 2h at 37°C. Wells were washed with PBST and incubated for 1h with anti-CAPN3 pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37°C. Finally, add 50μL stop solution to the wells and read at

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	450nm immediately. The binding activity of CAPN3 and TTN was shown in Figure 1, and this effect was in a dose dependent manner.
Form	20 mM Tris, 150 mM NaCl, pH 8.0, containing 0.05 % sarcosyl and 5 % trehalose.
Bio-activity	Binding activity of CAPN3 with TTN
Molecular Mass	32 kDa
AA Sequence	IIFVSDRANSNKELGVDQESEEGKGKTSPDKQKQSPQPQPGSSDQESEEQQQFRNI FKQIAGDDMEICADELKKVLNTVVNKHKDLKTHGFTLESCRSMLALMDTDGSGKLN LQEFHHLWNKIKAWQKIFKHYDQSGTINSYEMRNAVNDAGFHLNNQLYDIITMRYA DKHMNIDFDSFICCFVRLEGMFRAFHAFDKDGDIKLNVLWLQLTMYA
Endotoxin	<1.0EU per 1µg (determined by the LAL method).
Purity	>95%
Applications	Cell culture; Activity Assays.
Notes	The kit is designed for in vitro and research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other preclinical procedures.
Stability	The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37centigrade for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.
Storage	Avoid repeated freeze/thaw cycles. Store at 2-8 centigrade for one month. Aliquot and store at -80 centigrade for 12 months.

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Reconstitution

Reconstitute in 20 mM Tris, 150 mM NaCl (pH 8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

GENE INFORMATION

Gene Name CAPN3 calpain 3, (p94) [Homo sapiens]

Official Symbol CAPN3

Synonyms

CAPN3; calpain 3, (p94); LGMD2, LGMD2A; calpain-3; CANP3; nCL 1; p94; calpain L3; new calpain 1; LGMD2; nCL-1; CANPL3; LGMD2A; MGC4403; MGC10767; MGC11121; MGC14344;

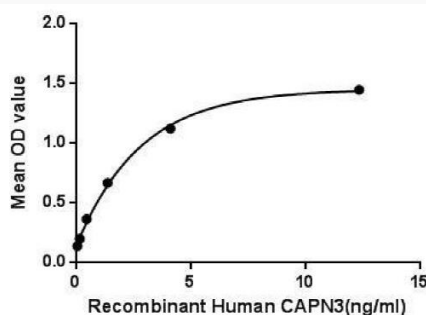
Gene ID 825

mRNA Refseq NM_000070

Protein Refseq NP_000061

MIM 114240

UniProt ID P20807

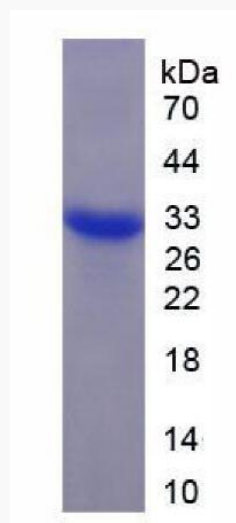


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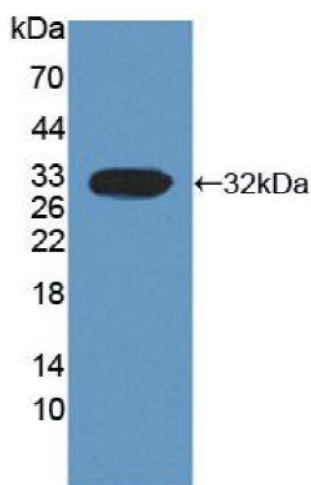
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The binding activity of CAPN3 with TTN.



SDS-PAGE



Western Blot

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