Anti-Calpain 10 antibody ab28226

Overview

Product name: Anti-Calpain 10 antibody
Description: Rabbit polyclonal to Calpain 10
Host species: Rabbit
Specificity: The antibody binds to Calpain-10, but does not cross react with the other calpain family members (Calpain-1, Calpain-2, Calpain-3, etc.). The antibody binds to the aminoterminal end of domain-III and recognizes latent and amino-processed Calpain-10.

Tested applications: Suitable for: WB, ICC/IF, IHC-P
Species reactivity: Reacts with: Mouse, Rat, Human

Immunogen: Synthetic peptide based on the aminoterminal end of domain-III in the large subunit, using the human sequence. Read Abcam's proprietary immunogen policy (Peptide available as ab41361.)

Properties

Form: Liquid
Storage instructions: Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer: Preservative: 0.05% Sodium azide
Constituent: 50% Glycerol
Purity: Immunogen affinity purified
Clonality: Polyclonal
Isotype: IgG

Applications

Our Abpromise guarantee covers the use of ab28226 in the following tested applications.
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

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### Target

**Function**  
Calcium-regulated non-lysosomal thiol-protease which catalyze limited proteolysis of substrates involved in cytoskeletal remodeling and signal transduction.

**Tissue specificity**  
Ubiquitous.

**Involvement in disease**  
Defects in CAPN10 are a cause of susceptibility to diabetes mellitus non-insulin-dependent type 1 (NIDDM1) [MIM:601283]. It is a multifactorial disorder of glucose homeostasis caused by a lack of sensitivity to the body's own insulin. Affected individuals usually have an obese body habitus and manifestations of a metabolic syndrome characterized by diabetes, insulin resistance, hypertension and hypertriglyceridemia. The disease results in long-term complications that affect the eyes, kidneys, nerves, and blood vessels.

**Sequence similarities**  
Belongs to the peptidase C2 family. Contains 1 calpain catalytic domain.

### Images

ICC/IF image of ab28226 stained MCF7 cells. The cells were 100% methanol fixed (5 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab28226, 1µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

### Notes

**WB**  
1/1000. Predicted molecular weight: 74.9 kDa. 1/1000 when using colorimetric substrates such as BCIP/NBT, and 1:5000 for chemiluminescent substrates. Higher concentrations of antibody may be needed for samples from more distantly related species. Post-translational modifications such as phosphorylation can produce isoforms with larger apparent MW on SDS PAGE gels. When used against the reduced protein, ab28226 identifies bands at 78 kD, 66 kD, and a series of further cleaved forms. Dilution optimised using Chromogenic detection.

**ICC/IF**  
Use a concentration of 1 - 5 µg/ml.

**IHC-P**  
Use a concentration of 5 µg/ml. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
IHC image of ab28226 staining in normal human pancreas formalin fixed paraffin embedded tissue section, performed on a Leica Bond™ system using the standard protocol F. The section was pretreated using heat mediated antigen retrieval with sodium citrate buffer (pH6, epitope retrieval solution 1) for 20 mins. The section was then incubated with ab28226, 5µg/ml, for 15 mins at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.

For other IHC staining systems (automated and non-automated) customers should optimize variable parameters such as antigen retrieval conditions, primary antibody concentration and antibody incubation times.

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