

Calpain 8 (D-15): sc-67698

BACKGROUND

Calpains are a family of cytosolic calcium-regulated cysteine proteases that functions to regulate a wide variety of cellular processes. Calpain 8, also known as nCL-2, is mostly produced at the surface of gastric epithelia and duodenal goblet cells and is likely involved with trafficking across the membranes of cells on the gastric surface. Calpain 8 acts to proteolyze the β subunit of the cytosolic coat protein. Coat proteins (COPs) are six subunit complexes found on the surface of vesicles within a cell. Calpain 8 proteolysis of the β subunit releases the COP from the cell's Golgi body.

REFERENCES

1. Stenbeck, G., et al. 1993. β '-COP, a novel subunit of coatomer. EMBO J. 12: 2841-2845.
2. Lee, H.J., et al. 1998. Molecular cloning and characterization of a novel tissue-specific Calpain predominantly expressed in the digestive tract. Biol. Chem. 379: 175-183.
3. Braun, C., et al. 1999. CAPN 8: isolation of a new mouse Calpain-isoenzyme. Biochem. Biophys. Res. Commun. 260: 671-675.
4. Hata, S., et al. 2001. Both the conserved and the unique gene structure of stomach-specific calpains reveal processes of Calpain gene evolution. J. Mol. Evol. 53: 191-203.
5. Hata, S., et al. 2006. Stomach-specific Calpain, nCL-2, localizes in mucus cells and proteolyzes the β subunit of coatomer complex, β -COP. J. Biol. Chem. 281: 11214-11224.
6. Hata, S., et al. 2007. Stomach-specific calpain, nCL-2/Calpain 8, is active without Calpain regulatory subunit and oligomerizes through C2-like domains. J. Biol. Chem. 282: 27847-27856.

CHROMOSOMAL LOCATION

Genetic locus: Capn8 (mouse) mapping to 1 H5.

SOURCE

Calpain 8 (D-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Calpain 8 of mouse origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-67698 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

Calpain 8 (D-15) is recommended for detection of Calpain 8 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Calpain 8 siRNA (m): sc-62666, Calpain 8 shRNA Plasmid (m): sc-62666-SH and Calpain 8 shRNA (m) Lentiviral Particles: sc-62666-V.

Molecular Weight of full length Calpain 8: 76 kDa.

Molecular Weight of Calpain 8 isoform nCL-2': 43 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

For research use only, not for use in diagnostic procedures.



Try **Calpain (B-8): sc-271856**, our highly recommended monoclonal alternative to Calpain 8 (D-15).