

CTRB1/2 (F-13): sc-161496

BACKGROUND

Chymotrypsins are digestive enzymes that can perform proteolysis by cleaving peptides at the carboxyl side of tyrosine, tryptophan, leucine and phenylalanine, although over time they can also hydrolyze other amide bonds, especially those with leucine-donated carboxyls. Chymotrypsins cleave peptide bonds by attacking the un-reactive carbonyl group with a powerful nucleophile, which momentarily becomes covalently bonded to the substrate to form an intermediate. Chymotrypsin B (CTRB1) and Chymotrypsin B2 (CTRB2) are synthesized in the pancreas by protein biosynthesis as a precursor that is enzymatically inactive, but becomes active as a three polypeptide molecule that is interconnected by disulfide bonds.

REFERENCES

1. Bell, G.I., et al. 1984. Isolation and sequence of a rat chymotrypsin B gene. *J. Biol. Chem.* 259: 14265-14270.
2. Honey, N.K., et al. 1984. Chromosomal assignments of human genes for serine proteases trypsin, chymotrypsin B, and elastase. *Somat. Cell Mol. Genet.* 10: 369-376.
3. Honey, N.K., et al. 1984. Chromosomal assignments of genes for trypsin, chymotrypsin B, and elastase in mouse. *Somat. Cell Mol. Genet.* 10: 377-383.
4. Appel, W. 1986. Chymotrypsin: molecular and catalytic properties. *Clin. Biochem.* 19: 317-322.
5. Katoh, M. 1999. Chymotrypsin. *Nippon Rinsho* 57: 372-374.
6. Jelinek, B., et al. 2004. Ala226 to Gly and Ser189 to Asp mutations convert rat chymotrypsin B to a trypsin-like protease. *Protein Eng. Des. Sel.* 17: 127-131.

CHROMOSOMAL LOCATION

Genetic locus: CTRB1/CTRB2 (human) mapping to 16q23.1; *Ctrb1* (mouse) mapping to 8 E1.

SOURCE

CTRB1/2 (F-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CTRB1 of rat origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-161496 P, (100 µg 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

CTRB1/2 (F-13) is recommended for detection of Chymotrypsinogen B1 of mouse, rat and human origin, and Chymotrypsinogen B2 of human origin; and Chymotrypsin B1 of mouse, rat and human origin and Chymotrypsin B2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

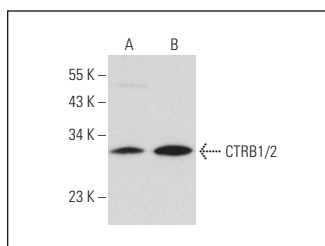
Molecular Weight of CTRB1: 28 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, c4 whole cell lysate: sc-364186 or human pancreas extract: sc-363770.

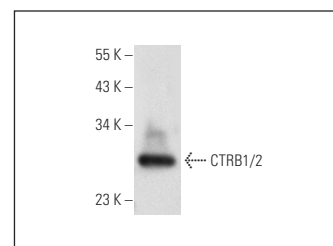
RECOMMENDED SECONDARY REAGENTS

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



CTRB1/2 (F-13): sc-161496. Western blot analysis of CTRB1/2 expression in c4 (A) and NIH/3T3 (B) whole cell lysates.



CTRB1/2 (F-13): sc-161496. Western blot analysis of CTRB1/2 expression in human pancreas tissue extract.

RESEARCH USE

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

MONOS
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Try **CTRB1/2 (B-3): sc-398721** or **CTRB1/2 (D-5): sc-393414**, our highly recommended monoclonal alternatives to CTRB1/2 (F-13).