

# CTRB1/2 (B-3): sc-398721



The Power to Question

## 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 precursors (Chymotrypsinogen B1 and Chymotrypsinogen B2) that are enzymatically inactive, but become 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

CTRB1/2 (B-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 133-160 within an internal region of CTRB1 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CTRB1/2 (B-3) is available conjugated to agarose (sc-398721 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398721 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398721 PE), fluorescein (sc-398721 FITC), Alexa Fluor® 488 (sc-398721 AF488), Alexa Fluor® 546 (sc-398721 AF546), Alexa Fluor® 594 (sc-398721 AF594) or Alexa Fluor® 647 (sc-398721 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398721 AF680) or Alexa Fluor® 790 (sc-398721 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398721 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## APPLICATIONS

CTRB1/2 (B-3) is recommended for detection of Chymotrypsinogen B1 and Chymotrypsin B1 of mouse, rat and human origin, and Chymotrypsinogen B2 and Chymotrypsin B2 of human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for CTRB1 siRNA (m): sc-142626, CTRB1 shRNA Plasmid (m): sc-142626-SH and CTRB1 shRNA (m) Lentiviral Particles: sc-142626-V.

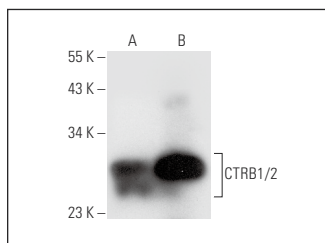
Molecular Weight of CTRB1/2: 28 kDa.

Positive Controls: human pancreas extract: sc-363770, rat pancreas extract: sc-364806 or mouse pancreas extract: sc-364244.

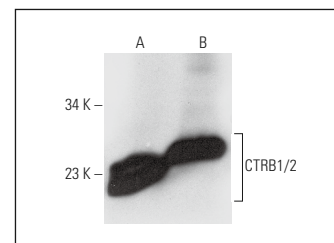
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



CTRB1/2 (B-3): sc-398721. Western blot analysis of CTRB1/2 expression in human pancreas (A) and mouse pancreas (B) tissue extracts.



CTRB1/2 (B-3): sc-398721. Western blot analysis of CTRB1/2 expression in rat pancreas (A) and mouse pancreas (B) tissue extracts.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.