

Mesotrypsinogen (N-17): sc-47127

BACKGROUND

Mesotrypsinogen is an isoform of human Trypsin, belonging to the Trypsin family of serine proteases. Mesotrypsinogen is known to be resistant to common Trypsin inhibitors such as SBTI and SPINK1, which may contribute to pathogenesis of pancreatitis by reducing the protective levels of SPINK1 in the pancreas. A minor pancreatic digestive enzyme that degrades dietary Trypsin inhibitors in the gut, Mesotrypsinogen may function to facilitate the digestion of foods rich in natural Trypsin inhibitors. Mesotrypsinogen migrates to the brain and pancreas and operates on peptide linkages involving the carboxyl group of lysine or Arginine. The gene encoding the Mesotrypsinogen protein maps to the locus of T cell receptor β variable orphans on chromosome 9.

REFERENCES

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2. Nyaruhucha, C.N., et al. 1997. Identification and expression of the cDNA-encoding human Mesotrypsinogen, an isoform of Trypsin with inhibitor resistance. *J. Biol. Chem.* 272: 10573-10578.
3. Chen, J.M., et al. 1999. Exclusion of anionic trypsinogen and Mesotrypsinogen involvement in hereditary pancreatitis without cationic trypsinogen gene mutations. *Scand. J. Gastroenterol.* 34: 831-832.
4. Szilagyi, L., et al. 2001. Comparative *in vitro* studies on native and recombinant human cationic Trypsins. Cathepsin B is a possible pathological activator of trypsinogen in pancreatitis. *J. Biol. Chem.* 276: 24574-24580.
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6. Nemoda, Z., et al. 2005. Genetic and biochemical characterization of the E32del polymorphism in human Mesotrypsinogen. *Pancreatology* 5: 273-278.
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CHROMOSOMAL LOCATION

Genetic locus: PRSS3 (human) mapping to 9p13.3, PRSS2 (human) mapping to 7p22.3.

SOURCE

Mesotrypsinogen (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Mesotrypsinogen of human origin.

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.

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-47127 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Mesotrypsinogen (N-17) is recommended for detection of Mesotrypsinogen and Trypsin-2 of human origin and Mesotrypsinogen of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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); may cross-react with a broad range of trypsins.

Mesotrypsinogen (N-17) is also recommended for detection of Mesotrypsinogen and Trypsin-2 in additional species, including equine.

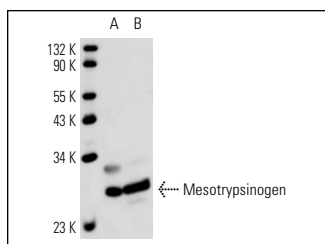
Molecular Weight of Mesotrypsinogen: 31 kDa.

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

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



Mesotrypsinogen (N-17): sc-47127. Western blot analysis of Mesotrypsinogen expression in rat pancreas (A) and mouse pancreas (B) tissue extracts.

PROTOCOLS

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