SANTA CRUZ BIOTECHNOLOGY, INC.

C1INH (B-11): sc-377062

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The serine proteinase inhibitors (serpins) comprise a superfamily of proteins with a diverse set of functions, including the control of complement activation, blood coagulation, programmed cell death and cell development. Serpins are secreted glycoproteins that contain a stretch of peptide that mimics a true substrate for a corresponding serine protease. The most abundant serpins in human plasma are α-1-antitrypsin (AAT) and α-1-antichymotrypsin (AACT). Other serpin family members include pigment epithelium-derived growth factor (PEDF), human protease nexin 1 (PN-1), protease inhibitor 6 (PI-6), thyroxine-binding globulin precursor (TBG), protease inhibitor 9 (PI-9), serine protease inhibitor 3 (Spi3), plasma protease C1 inhibitor (C1INH), Headpin, SerpinB12, monocyte/neutrophil elastase inhibitor members 1a, 1b and 1c (M/NEI) and squamous cell carcinoma antigens 1 and 2 (SCCA1/2). Antithrombin-III (ATIII) is a crucial serine protease inhibitor that regulates the coagulation cascade in blood and inhibits Thrombin.

REFERENCES

1. Curd, J.G., et al. 1981. Purification and characterization of two functionally distinct forms of C1 inhibitor from a patient with angioedema. Clin. Exp. Immunol. 145: 261-270.
2. Pixley, R.A., et al. 1985. The regulation of human Factor XIIa by plasma proteinase inhibitors. J. Biol. Chem. 260: 1723-1729.

CHROMOSOMAL LOCATION

Genetic locus: SERPING1 (human) mapping to 11q12.1; Serping1 (mouse) mapping to 2 D.

SOURCE

C1INH (B-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 215-249 within an internal region of C1INH of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

C1INH (B-11) is available conjugated to agarose (sc-377062 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-377062 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377062 PE), fluorescein (sc-377062 FITC), Alexa Fluor® 488 (sc-377062 AF488), Alexa Fluor® 546 (sc-377062 AF546), Alexa Fluor® 594 (sc-377062 AF594) or Alexa Fluor® 647 (sc-377062 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377062 AF680) or Alexa Fluor® 790 (sc-377062 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-377062 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

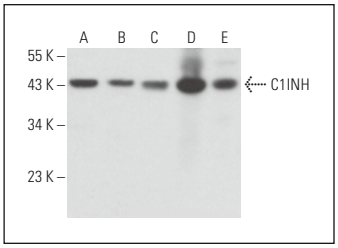
C1INH (B-11) is recommended for detection of C1INH of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 C1INH siRNA (h): sc-45608, C1INH siRNA (m): sc-45609, C1INH shRNA Plasmid (h): sc-45608-SH, C1INH shRNA Plasmid (m): sc-45609-SH, C1INH shRNA (h) Lentiviral Particles: sc-45608-V and C1INH shRNA (m) Lentiviral Particles: sc-45609-V.

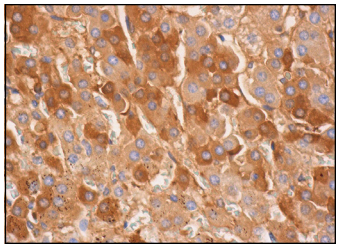
Molecular Weight of C1INH: 55 kDa.

Molecular Weight of glycosylated C1INH: 75-105 kDa.

DATA



C1INH (B-11): sc-377062. Western blot analysis of C1INH expression in Hep G2 (**A**), HEK293 (**B**) and THP-1 (**C**) whole cell lysates and mouse liver (**D**) and rat liver (**E**) tissue extracts.



C1INH (B-11): sc-377062. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Yang, J., et al. 2016. iTRAQ-based proteomics identification of serum biomarkers of two chronic hepatitis B subtypes diagnosed by traditional chinese medicine. Biomed Res. Int. 2016: 3290260.
2. García-Hernández, V., et al. 2018. A tandem mass tag (TMT) proteomic analysis during the early phase of experimental pancreatitis reveals new insights in the disease pathogenesis. J. Proteomics 181: 190-200.
3. Mueller, S.K., et al. 2019. Tissue and exosomal serine protease inhibitors are significantly overexpressed in chronic rhinosinusitis with nasal polyps. Am. J. Rhinol. Allergy 33: 359-368.
4. van Heukelum, S., et al. 2021. A central role for anterior cingulate cortex in the control of pathological aggression. Curr. Biol. 31: 2321-2333.e5.
5. Kim, H.N., et al. 2021. The thrombin receptor modulates astroglia-neuron trophic coupling and neural repair after spinal cord injury. Glia 69: 2111-2132.
6. Heukelum, S.V., et al. 2021. Structural degradation in midcingulate cortex is associated with pathological aggression in mice. Brain Sci. 11: 868.

STORAGE

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