

# cortistatin (A-7): sc-393108

## BACKGROUND

Cortistatin is a 155 amino acid protein encoded by the human gene CORT. This product of the CORT gene is a neuropeptide with strong structural similarity to somatostatin. It binds to all known somatostatin receptors, and shares many pharmacological and functional properties with somatostatin, including the depression of neuronal activity. However, cortistatin also has many properties distinct from somatostatin, such as induction of slow-wave sleep, apparently by antagonism of the excitatory effects of acetylcholine on the cortex, reduction of locomotor activity, and activation of cation selective currents not responsive to somatostatin.

## REFERENCES

1. Fukusumi, S., et al. 1997. Identification and characterization of a novel human cortistatin-like peptide. *Biochem. Biophys. Res. Commun.* 232: 157-163.
2. de Lecea, L., et al. 1997. Cloning, mRNA expression, and chromosomal mapping of mouse and human preproctortistatin. *Genomics* 42: 499-506.

## CHROMOSOMAL LOCATION

Genetic locus: CORT (human) mapping to 1p36.22.

## SOURCE

cortistatin (A-7) is a mouse monoclonal antibody raised against amino acids 1-105 mapping at the N-terminus of cortistatin of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

cortistatin (A-7) is available conjugated to agarose (sc-393108 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393108 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393108 PE), fluorescein (sc-393108 FITC), Alexa Fluor® 488 (sc-393108 AF488), Alexa Fluor® 546 (sc-393108 AF546), Alexa Fluor® 594 (sc-393108 AF594) or Alexa Fluor® 647 (sc-393108 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393108 AF680) or Alexa Fluor® 790 (sc-393108 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

cortistatin (A-7) is recommended for detection of cortistatin 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).

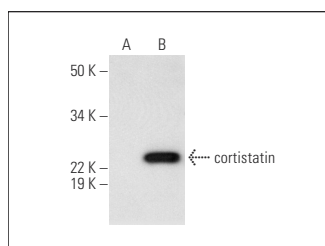
Suitable for use as control antibody for cortistatin siRNA (h): sc-39726, cortistatin shRNA Plasmid (h): sc-39726-SH and cortistatin shRNA (h) Lentiviral Particles: sc-39726-V.

Positive Controls: human cortistatin transfected HEK293T whole cell lysate.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BPHRP: sc-516102 or m-IgGκ BPHRP (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 BPHRP-FITC: sc-516140 or m-IgGκ BPHRP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



cortistatin (A-7): sc-393108. Western blot analysis of cortistatin expression in non-transfected (A) and human cortistatin transfected (B) HEK293T whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Zhao, Y., et al. 2019. Cortistatin binds to TNF-α receptors and protects against osteoarthritis. *EBioMedicine* 41: 556-570.
2. Zhao, Y., et al. 2020. Cortistatin protects against intervertebral disc degeneration through targeting mitochondrial ROS-dependent NLRP3 inflammasome activation. *Theranostics* 10: 7015-7033.
3. Kolkhir, P., et al. 2022. Mast cells, cortistatin, and its receptor, MRGPRX2, are linked to the pathogenesis of chronic prurigo. *J. Allergy Clin. Immunol.* 149: 1998-2009.e5.
4. Cao, J., et al. 2022. Cortistatin attenuates titanium particle-induced osteolysis through regulation of TNFR1-ROS-caspase-3 signaling in osteoblasts. *Ann. N.Y. Acad. Sci.* 1513: 140-152.
5. Pyatilova, P., et al. 2022. The number of MRGPRX2-expressing cells is increased in skin lesions of patients with indolent systemic mastocytosis, but is not linked to symptom severity. *Front. Immunol.* 13: 930945.

## 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.