

CIS (F-9): sc-166326

BACKGROUND

Src homology (SH2) domains are noncatalytic sequences that are conserved among a number of cytoplasmic signaling proteins. These signaling proteins are directly regulated by receptor tyrosine kinases and control the activation of mitogenic signal transduction pathways by such receptors. For instance, ligand-induced activation of the EGF and PDGF receptors induces dimerization, triggers receptor autophosphorylation on tyrosine residues and results in the binding of a number of cytoplasmic SH2 domain proteins such as PLC- γ 1, Ras GAP and PI 3-kinase p85 to the activated receptors. The Shc gene encodes three proteins with a single SH2 domain but no identifiable catalytic domain. CIS, cytokine-inducible SH2-containing protein, is a 267 amino acid protein with a single 96 amino acid SH2 domain that associates the tyrosine-phosphorylated β chain of the IL-3 receptor with the tyrosine-phosphorylated Epo receptor. CIS was initially described as an immediate early cytokine-responsive gene and appears to be a unique regulator of cytokine signaling.

REFERENCES

- Ullrich, A. and Schlessinger, J. 1990. Signal transduction by receptors with tyrosine kinase activity. *Cell* 61: 203-212.
- Ellis, C., et al. 1990. Phosphorylation of GAP and GAP-associated proteins by transforming and mitogenic tyrosine kinases. *Nature* 343: 377-381.

CHROMOSOMAL LOCATION

Genetic locus: CISH (human) mapping to 3p21.2; Cish (mouse) mapping to 9 F1.

SOURCE

CIS (F-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 10-38 at the N-terminus of CIS of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CIS (F-9) is available conjugated to agarose (sc-166326 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166326 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166326 PE), fluorescein (sc-166326 FITC), Alexa Fluor[®] 488 (sc-166326 AF488), Alexa Fluor[®] 546 (sc-166326 AF546), Alexa Fluor[®] 594 (sc-166326 AF594) or Alexa Fluor[®] 647 (sc-166326 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-166326 AF680) or Alexa Fluor[®] 790 (sc-166326 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-166326 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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STORAGE

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

APPLICATIONS

CIS (F-9) is recommended for detection of CIS of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), 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 CIS siRNA (h): sc-43685, CIS siRNA (m): sc-61854, CIS shRNA Plasmid (h): sc-43685-SH, CIS shRNA Plasmid (m): sc-61854-SH, CIS shRNA (h) Lentiviral Particles: sc-43685-V and CIS shRNA (m) Lentiviral Particles: sc-61854-V.

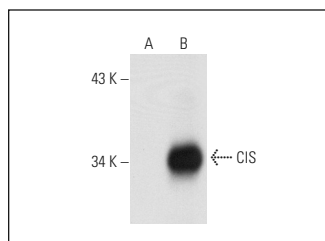
Molecular Weight of CIS: 32 kDa.

Positive Controls: CIS (m2): 293T Lysate: sc-119271 or mouse liver extract: sc-2256.

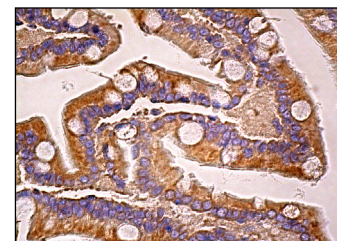
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CIS (F-9): sc-166326. Western blot analysis of CIS expression in non-transfected: sc-117752 (A) and mouse CIS transfected: sc-119271 (B) 293T whole cell lysates.



CIS (F-9): sc-166326. Immunoperoxidase staining of formalin fixed, paraffin-embedded human duodenum tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

- Zhang, H., et al. 2022. AMFR drives allergic asthma development by promoting alveolar macrophage-derived GM-CSF production. *J. Exp. Med.* 219: e20211828.

RESEARCH USE

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