

# CIS (D-8): sc-74581

## 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- $\gamma$ 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  $\beta$  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

1. Ullrich, A. and Schlessinger, J. 1990. Signal transduction by receptors with tyrosine kinase activity. *Cell* 61: 203-212.
2. Ellis, C., et al. 1990. Phosphorylation of GAP and GAP-associated proteins by transforming and mitogenic tyrosine kinases. *Nature* 343: 377-381.
3. Morrison, D.K., et al. 1990. Platelet-derived growth factor (PDGF)-dependent association of phospholipase C- $\gamma$  with the PDGF receptor signaling complex. *Mol. Cell. Biol.* 10: 2359-2366.
4. Cantley, L.C., et al. 1991. Oncogenes and signal transduction. *Cell* 64: 281-302.

## CHROMOSOMAL LOCATION

Genetic locus: CISH (human) mapping to 3p21.2.

## SOURCE

CIS (D-8) is a mouse monoclonal antibody raised against amino acids 1-80 mapping near the N-terminus of CIS of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG $_1$  kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CIS (D-8) is available conjugated to agarose (sc-74581 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-74581 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-74581 PE), fluorescein (sc-74581 FITC), Alexa Fluor<sup>®</sup> 488 (sc-74581 AF488), Alexa Fluor<sup>®</sup> 546 (sc-74581 AF546), Alexa Fluor<sup>®</sup> 594 (sc-74581 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-74581 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-74581 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-74581 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## RESEARCH USE

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

## APPLICATIONS

CIS (D-8) is recommended for detection of CIS of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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 shRNA Plasmid (h): sc-43685-SH and CIS shRNA (h) Lentiviral Particles: sc-43685-V.

Molecular Weight of CIS: 32 kDa.

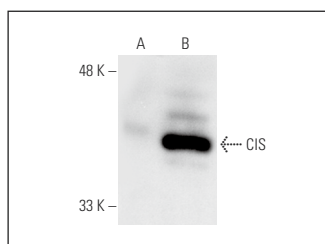
Positive Controls: mouse liver extract: sc-2256 or human CIS transfected CHO whole cell lysate.

## RECOMMENDED SUPPORT REAGENTS

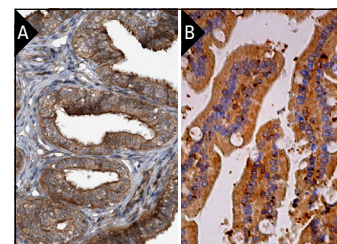
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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 $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.
- 4) Immunohistochemistry: use m-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



CIS (D-8): sc-74581. Western blot analysis of CIS expression in non-transfected (A) and human CIS transfected (B) CHO whole cell lysates.



CIS (D-8): sc-74581. Immunoperoxidase staining of formalin fixed, paraffin-embedded human fallopian tube showing cytoplasmic staining of glandular cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing cytoplasmic staining of glandular cells (B).

## SELECT PRODUCT CITATIONS

1. Kitamura, S., et al. 2017. Response predictors of S-1, cisplatin, and docetaxel combination chemotherapy for metastatic gastric cancer: microarray analysis of whole human genes. *Oncology* 93: 127-135.

## STORAGE

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