

CIS (C-20): sc-1528

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

1. Ullrich, A., et al. 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- γ 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.
5. McGlade, J., et al. 1992. Shc proteins are phosphorylated and regulated by the v-Src and v-Fps protein-tyrosine kinases. *Proc. Natl. Acad. Sci. USA* 89: 8869-8873.
6. Yoshimura, A., et al. 1995. A novel cytokine-inducible gene CIS encodes an SH2-containing protein that binds to tyrosine-phosphorylated interleukin 3 and erythropoietin receptors. *EMBO J.* 14: 2816-2826.

CHROMOSOMAL LOCATION

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

SOURCE

CIS (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of CIS of human origin.

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-1528 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

CIS (C-20) is recommended for detection of CIS of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

CIS (C-20) is also recommended for detection of CIS in additional species, including equine, canine and bovine.

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.

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) 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.

SELECT PRODUCT CITATIONS

1. Cheng, J., et al. 2004. Down-regulation of SHP1 and up-regulation of negative regulators of JAK/STAT signaling in HTLV-1 transformed cell lines and freshly transformed human peripheral blood CD4⁺ T-cells. *Leuk. Res.* 28: 71-82.

STORAGE

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

PROTOCOLS

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



Try **CIS (D-8): sc-74581**, our highly recommended monoclonal alternative to CIS (C-20).