

# ICOS (C-20): sc-9554

## BACKGROUND

T cell proliferation and lymphokine production are triggered by occupation of the TCR by antigen, followed by a costimulatory signal that is delivered by a ligand expressed on antigen presenting cells. The B7-related cell surface proteins CD80 (B7-1) and CD86 (B7-2) are expressed on antigen presenting cells. CD80 and CD86 bind to the homologous T cell receptors CD28 and CTLA-4 (cytotoxic T lymphocyte-associated protein-4) and trigger costimulatory signals for optimal T cell activation. CTLA-4 shares 31% overall amino acid identity with CD28 and it has been proposed that CD28 and CTLA-4 are functionally redundant. ICOS (inducible co-stimulator) is related to CD28 and CTLA-4, and these three proteins are thought to compose a receptor family. ICOS stimulation enhances T cell responses and superinduces the synthesis of IL-10, but it does not induce IL-2 upregulation.

## REFERENCES

- Freeman, G.J., et al. 1991. Structure, expression, and T cell costimulatory activity of the murine homologue of the human B lymphocyte activation antigen B7. *J. Exp. Med.* 174: 625-631.
- Schwartz, R.H. 1992. Costimulation of T lymphocytes: the role of CD28, CTLA-4, and B7/BB1 in interleukin-2 production and immunotherapy. *Cell* 71: 1065-1068.
- Peach, R.J., et al. 1995. Both extracellular immunoglobulin-like domains of CD80 contain residues critical for binding T cell surface receptors CTLA-4 and CD28. *J. Biol. Chem.* 270: 21181-21187.
- Fargeas, C.A., et al. 1995. Identification of residues in the V domain of CD80 (B7-1) implicated in functional interactions with CD28 and CTLA4. *J. Exp. Med.* 182: 667-675.
- Gribben, J.G., et al. 1995. CTLA4 mediates antigen-specific apoptosis of human T cells. *Proc. Natl. Acad. Sci. USA* 92: 811-815.
- Hutloff, A., et al. 1999. ICOS is an inducible T cell co-stimulator structurally and functionally related to CD28. *Nature* 397: 263-266.

## CHROMOSOMAL LOCATION

Genetic locus: ICOS (human) mapping to 2q33.2.

## SOURCE

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

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-9554 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

ICOS (C-20) is recommended for detection of ICOS of human origin by Western Blotting (starting dilution 1:200, 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 ICOS siRNA (h): sc-42770, ICOS shRNA Plasmid (h): sc-42770-SH and ICOS shRNA (h) Lentiviral Particles: sc-42770-V.

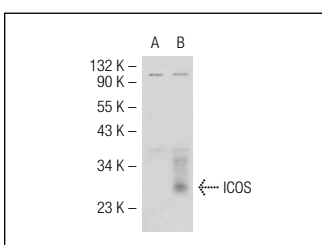
Molecular Weight of ICOS monomer: 27 kDa.

Molecular Weight of ICOS homodimer: 55-60 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



ICOS (C-20): sc-9554. Western blot analysis of ICOS expression in non-transfected: sc-117752 (A) and human ICOS transfected: sc-114660 (B) 293T whole cell lysates.

## RESEARCH USE

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



Try **ICOS (ANC6C6-A3): sc-65285**, our highly recommended monoclonal alternative to ICOS (C-20).