SANTA CRUZ BIOTECHNOLOGY, INC.

p-c-Fms/CSF-1R (Tyr 708): sc-33358

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The major translational product of the v-Fms oncogene, originally isolated from the McDonough strain of feline sarcoma virus, has been identified as a glycoprotein with intrinsic tyrosine kinase activity. The v-Fms human cellular homolog, c-Fms, has been molecularly cloned and mapped to band q34 on chromosome 5 and identified as the receptor for hematopoietic ligand, CSF-1. Ligand-induced activation of the intrinsic CSF-1R protein tyrosine kinase triggers its interaction with cytoplasmic effector molecules, whose enzymatic activities in part determine the specificity of the CSF-1 response. A series of novel cyclin-like (CYL) genes have been identified in mouse macrophages; the genes are regulated by CSF-1, inducible in G_1 and only distantly related to mammalian cyclins A and B or to yeast CLN genes. Tyrosine 809 of CSF-1R lies in a highly-conserved region of the PTK domain which has proven to be a major *in vivo* phosphorylation site in many family members. Mutation analysis for Tyrosine 809 shows decreased ability to transduce ligand-dependent mitogenic signals, suggesting that the residue is necessary for interaction with growth factors such as CSF-1.

REFERENCES

1. Groffen, J., et al. 1983. Chromosomal localization of the human c-Fms oncogene. Nucleic Acids Res.11: 6331-6341.
2. Sherr, C.J., et al.1985. The c-Fms proto-oncogene product is related to the receptor for the mononuclear phagocyte growth factor, CSF-1. Cell 41: 665-676.
3. Roussel, M.F., et al.1987. Transforming potential of c-Fms proto-oncogene (CSF-1 receptor). Nature 325: 549-552.
4. Sherr, C.J., et al. 1991. The colony-stimulating factor 1 receptor (Fms): signal transduction and hematopoietic cell transformation. In Brugge, J., et al., eds. The Origins of Human Cancer. Cold Spring Harbor, New York: Cold Spring Harbor Laboratory Press.
5. Matsushime, H., et al. 1991. Colony-stimulating factor 1 regulates novel cyclins during the G_1 phase of the cell cycle. Cell 65: 701-713.

CHROMOSOMAL LOCATION

Genetic locus: CSF1R (human) mapping to 5q32; Csf1r (mouse) mapping to 18 E1.

SOURCE

p-c-Fms/CSF-1R (Tyr 708) is a rabbit polyclonal antibody raised against a short amino acid sequence containing Tyr 708 phosphorylated c-Fms/CSF-1R 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-33358 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p-c-Fms/CSF-1R (Tyr 708) is recommended for detection of Tyr 708 phosphorylated c-Fms/CSF-1R of mouse, rat and 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).

p-c-Fms/CSF-1R (Tyr 708) is also recommended for detection of correspondingly phosphorylated c-Fms/CSF-1R in additional species, including equine and canine.

Suitable for use as control antibody for c-Fms/CSF-1R siRNA (h): sc-29220, c-Fms/CSF-1R siRNA (m): sc-29847, c-Fms/CSF-1R shRNA Plasmid (h): sc-29220-SH, c-Fms/CSF-1R shRNA Plasmid (m): sc-29847-SH, c-Fms/CSF-1R shRNA (h) Lentiviral Particles: sc-29220-V and c-Fms/CSF-1R shRNA (m) Lentiviral Particles: sc-29847-V.

Molecular Weight of p-c-Fms/CSF-1R: 170 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, THP-1 cell lysate: sc-2238 or HL-60 whole cell lysate: sc-2209.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 2) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.

PROTOCOLS

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