SANTA CRUZ BIOTECHNOLOGY, INC.

# Flt-3/Flk-2 (H-300): sc-20733

## BACKGROUND

Stem cell tyrosine kinase (STK-1) has been cloned from a CD34+ hematopoietic stem cell enriched library and identified as the human homolog of a previously identified gene of mouse origin designated either Flk-2 or Flt-3. The STK-1 cDNA encodes a protein of 993 amino acids with 85% identity to Flt-3/Flk-2. STK-1 is a member of the type III receptor tyrosine kinase family that includes Kit (steel factor receptor), Fms and PDGF. STK-1 expression in blood and marrow is restricted to CD34+ cells, a population greatly enriched for hematopoietic stem/progenitor cells. STK-1 antiserum recognizes two polypeptides in these cells. The mouse homolog of STK-1, designated Flt-3/Flk-2, is expressed at high levels in hematopoietic cells and also in neural, gonadal, hepatic and placental tissues. It has been suggested that STK-1 and its murine homolog Flt-3/ Flk-2 may function as growth factor receptors on hematopoietic stem and/or progenitor cells.

## REFERENCES


1. Matthews, W., et al. 1991. A receptor tyrosine kinase specific to hematopoietic stem and progenitor cell-enriched populations. Cell 65: 1143-1152.
2. Rosnet, O., et al. 1991. Isolation and chromosomal localization of a novel Fms-like tyrosine kinase gene. Genomics 9: 380-385.


## CHROMOSOMAL LOCATION

Genetic locus: FLT3 (human) mapping to 13q12.2; Flt3 (mouse) mapping to 5 G3.

## SOURCE

Flt-3/Flk-2 (H-300) is a rabbit polyclonal antibody raised against amino acids 1-300 representing full length Flt-3/Flk-2 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.

## APPLICATIONS

Flt-3/Flk-2 (H-300) is recommended for detection of Flt-3/Flk-2 of mouse, rat and 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), 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).

Flt-3/Flk-2 (H-300) is also recommended for detection of Flt-3/Flk-2 in additional species, including canine.

Suitable for use as control antibody for Flt-3/Flk-2 siRNA (h): sc-29320, Flt-3/Flk-2 siRNA (m): sc-35396, Flt-3/Flk-2 shRNA Plasmid (h): sc-29320-SH, Flt-3/Flk-2 shRNA Plasmid (m): sc-35396-SH, Flt-3/Flk-2 shRNA (h) Lentiviral Particles: sc-29320-V and Flt-3/Flk-2 shRNA (m) Lentiviral Particles: sc-35396-V.

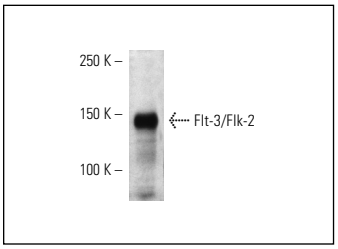
Molecular Weight of Flt-3/Flk-2 polypeptides: 160/130 kDa.

Positive Controls: THP-1 cell lysate: sc-2238 or rat brain extract: sc-2392.

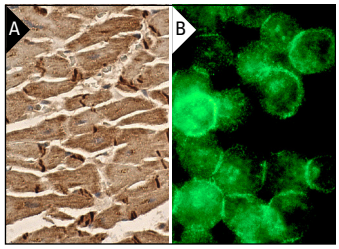
## RECOMMENDED SECONDARY REAGENTS

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 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 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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA




Flt-3/Flk-2 (H-300): sc-20733. Western blot analysis of Flt-3/Flk-2 expression in rat brain tissue extract.




Flt-3/Flk-2 (H-300): sc-20733. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing Z discs and cytoplasmic staining of myocytes (**A**). Immunofluorescence staining of methanol-fixed K-562 cells showing membrane localization (**B**).

## SELECT PRODUCT CITATIONS


1. Neves, D., et al. 2008. Does regular consumption of green tea influence expression of vascular endothelial growth factor and its receptor in aged rat erectile tissue? Possible implications for vasculogenic erectile dysfunction progression. Age 30: 217-228.
2. Eriksson, A., et al. 2010. Identification of AKN-032, a novel 2-aminopyrazine tyrosine kinase inhibitor, with significant preclinical activity in acute myeloid leukemia. Biochem. Pharmacol. 80: 1507-1516.


## 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.