

# SERAC1 (D-14): sc-169285

## BACKGROUND

SERAC1 (serine active site containing 1) is a 654 amino acid single-pass membrane protein that belongs to the SERAC1 family. Mutations in Serac1 or Synj2 cause male mouse sterility. SYNJ2 (synaptojanin 2), GTF2H5 (general transcription factor iih, polypeptide 5) and TULP4 (tubby-like protein 4) are all neighbors of the SERAC1 gene. Existing as three alternatively spliced isoforms, the SERAC1 gene is conserved in chimpanzee, canine, bovine, mouse, rat, chicken, zebrafish, fruit fly, mosquito and rice, and maps to human chromosome 6q25.3. Terminal deletions of 6q, beginning at 6q25 and spanning a 0.3 Mb region, may impair normal development of caudal structures, possibly acting on notochordal development. Making up nearly 6% of the human genome, chromosome 6 contains around 1,200 genes within 170 million base pairs of sequence. Deletion of a portion of the q arm of chromosome 6 is associated with early onset intestinal cancer suggesting the presence of a cancer susceptibility locus. A bipolar disorder susceptibility locus has also been identified on the q arm of chromosome 6.

## REFERENCES

- Mungall, A.J., et al. 2003. The DNA sequence and analysis of human chromosome 6. *Nature* 425: 805-811.
- McQueen, M.B., et al. 2005. Combined analysis from eleven linkage studies of bipolar disorder provides strong evidence of susceptibility loci on chromosomes 6q and 8q. *Am. J. Hum. Genet.* 77: 582-595.
- Schimenti, J.C., et al. 2005. Mutations in Serac1 or Synj2 cause proximal t haplotype-mediated male mouse sterility but not transmission ratio distortion. *Proc. Natl. Acad. Sci. USA* 102: 3342-3347.
- Titomanlio, L., et al. 2006. A locus for sacral/anorectal malformations maps to 6q25.3 in a 0.3 Mb interval region. *Eur. J. Hum. Genet.* 14: 971-974.
- Zhong, L., et al. 2008. Autoantibodies as potential biomarkers for breast cancer. *Breast Cancer Res.* 10: R40.
- Bläker, H., et al. 2008. Recurrent deletions at 6q in early age of onset non-HNPCC- and non-FAP-associated intestinal carcinomas. Evidence for a novel cancer susceptibility locus at 6q14-q22. *Genes Chromosomes Cancer* 47: 159-164.

## CHROMOSOMAL LOCATION

Genetic locus: SERAC1 (human) mapping to 6q25.3; Serac1 (mouse) mapping to 17 A1.

## SOURCE

SERAC1 (D-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SERAC1 of human origin.

## 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.

## 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-169285 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

SERAC1 (D-14) is recommended for detection of SERAC1 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).

SERAC1 (D-14) is also recommended for detection of SERAC1 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for SERAC1 siRNA (h): sc-95412, SERAC1 siRNA (m): sc-153342, SERAC1 shRNA Plasmid (h): sc-95412-SH, SERAC1 shRNA Plasmid (m): sc-153342-SH, SERAC1 shRNA (h) Lentiviral Particles: sc-95412-V and SERAC1 shRNA (m) Lentiviral Particles: sc-153342-V.

Molecular Weight of SERAC1 isoform 1: 74 kDa.

Molecular Weight of SERAC1 isoform 2: 60 kDa.

Molecular Weight of SERAC1 isoform 3: 19 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.