# C8y (S-13): sc-107176



The Power to Question

## **BACKGROUND**

The complement cascade is a multi-protein system that functions to clear pathogens from an infected host. Part of the innate (unchanging) immune system, the complement cascade consists of proteins and inactive zymogens that are present in blood and are stimulated by one of several triggers. Once stimulated, the cascade relays amplified responses throughout the body, ultimately activating the cell-killing membrane attack complex which can insert itself into the cell membrane and cause the cell to lyse. C8 $\gamma$  (complement component 8,  $\gamma$  polypeptide), also known as C8C or C8G, is one of three polypeptides (along with C8 $\alpha$  and C8 $\beta$ ) that constitutes C8, a component of the complement system. Consisting of 202 amino acids, C8 $\gamma$  is a secreted protein that is able to bind retinol and belongs to the lipocalin family and calycin superfamily.

## **REFERENCES**

- 1. Hunt, L.T., Elzanowski, A. and Barker, W.C. 1987. The homology of complement factor C8  $\gamma$  chain and  $\alpha$ -1-microglobulin. Biochem. Biophys. Res. Commun. 149: 282-288.
- Haefliger, J.A., Jenne, D., Stanley, K.K. and Tschopp, J. 1987. Structural homology of human complement component C8γ and plasma protein HC: identity of the cysteine bond pattern. Biochem. Biophys. Res. Commun. 149: 750-754.
- 3. Ng, S.C., Rao, A.G., Howard, O.M. and Sodetz, J.M. 1987. The eighth component of human complement: evidence that it is an oligomeric serum protein assembled from products of three different genes. Biochemistry 26: 5229-5233.
- 4. Kaufman, K.M., Snider, J.V., Spurr, N.K., Schwartz, C.E. and Sodetz, J.M. 1989. Chromosomal assignment of genes encoding the  $\alpha$ ,  $\beta$ , and  $\gamma$  subunits of human complement protein C8: identification of a close physical linkage between the  $\alpha$  and the  $\beta$  loci. Genomics 5: 475-480.
- Chan, P., Simon-Chazottes, D., Mattei, M.G., Guenet, J.L. and Salier, J.P. 1994. Comparative mapping of lipocalin genes in human and mouse: the four genes for complement C8γ chain, prostaglandin-D-synthase, oncogene-24p3, and progestagen-associated endometrial protein map to HSA9 and MMU2. Genomics 23: 145-150.
- Dewald, G., Cichon, S., Bryant, S.P., Hemmer, S., Nöthen, M.M. and Spurr, N.K. 1996. The human complement C8G gene, a member of the lipocalin gene family: polymorphisms and mapping to chromosome 9q34.3. Ann. Hum. Genet. 60: 281-291.
- 7. Online Mendelian Inheritance in Man, OMIM™. 1998. Johns Hopkins University, Baltimore, MD. MIM Number: 120930. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Chiswell, B., Lovelace, L.L., Brannen, C., Ortlund, E.A., Lebioda, L. and Sodetz, J.M. 2007. Structural features of the ligand binding site on human complement protein C8γ: a member of the lipocalin family. Biochim. Biophys. Acta 1774: 637-644.

## **CHROMOSOMAL LOCATION**

Genetic locus: C8G (human) mapping to 9q34.3.

#### **SOURCE**

C8<sub>Y</sub> (S-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of C8<sub>Y</sub> of human origin.

## **PRODUCT**

Each vial contains 200  $\mu g$  IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-107176 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## **APPLICATIONS**

C8 $\gamma$  (S-13) is recommended for detection of C8 $\gamma$  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); non cross-reactive with family members C8 $\alpha$  or C8 $\beta$ .

C8γ (S-13) is also recommended for detection of C8γ in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for C8 $\gamma$  siRNA (h): sc-92621, C8 $\gamma$  shRNA Plasmid (h): sc-92621-SH and C8 $\gamma$  shRNA (h) Lentiviral Particles: sc-92621-V.

Molecular Weight of C8γ: 22 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.

#### **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.



Try **C8** (**H-10**): **sc-515150**, our highly recommended monoclonal alternative to C8 (S-13).

Santa Cruz Biotechnology, Inc. 1.800.457.3801 831.457.3801 Fax 831.457.3801 Europe +00800 4573 8000 49 6221 4503 0 www.scbt.com