



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

# CD16-2 siRNA (m): sc-42759

## BACKGROUND

CD16 (known as CD16-2 in rodents) is the low affinity Fc  $\gamma$  receptor III (Fc  $\gamma$  RIII) for IgG and exists both as a polypeptide-anchored form known as Fc $\gamma$  RIIIA or CD16-A in human natural killer cells and macrophages and as a glycosylphosphatidylinositol-anchored form (Fc  $\gamma$  RIIIB or CD16-B) in neutrophils. CD16-A requires association of the  $\gamma$  subunit of Fc  $\epsilon$  RI or the  $\zeta$  subunit of the TCR-CD3 complex for cell surface expression. CD16-B is polymorphic; the two alleles are designated NA1 and NA2. CD16 is one of only four eukaryotic receptors known to exist natively in both the transmembrane (TM) isoform (CD16-A) and glycosylphosphatidylinositol (GPI) isoform (CD16-B). Patients with paroxysmal nocturnal haemoglobinuria (PNH) have only about 10% of the normal levels of CD16 on their neutrophils, whereas the expression of FcRII is unaffected. Analysis of FcRIII expression in cells of PNH patients, known to be deficient in PI-linked proteins, suggests FcRIII is not PI-linked in monocytes. The rodent homolog of human CD16 is known as CD16-2.

## REFERENCES

1. Fleit, H.B., Wright, S.D. and Unkeless, J.C. 1982. Human neutrophil Fc  $\gamma$  receptor distribution and structure. *Proc. Natl. Acad. Sci. USA* 79: 3275-3279.
2. Perussia, B., Trinchieri, G., Jackson, A., Warner, N.L., Faust, J., Rumpold, H., Kraft, D. and Lanier, L.L. 1984. The Fc receptor for IgG on human natural killer cells: phenotypic, functional, and comparative studies with monoclonal antibodies. *J. Immunol.* 133: 180-189.
3. Huizinga, T.W., van der Schoot, C.E., Jost, C., Klaassen, R., Kleijer, M., von dem Borne, A.E., Roos, D. and Tetteroo, P.A. 1988. The PI-linked receptor FcRIII is released on stimulation of neutrophils. *Nature* 333: 667-669.
4. Nagarajan, S., Chesla, S., Cobern, L., Anderson, P., Zhu, C. and Selvaraj, P. 1995. Ligand binding and phagocytosis by CD16 (Fc  $\gamma$  receptor III) isoforms. Phagocytic signaling by associated  $\zeta$  and  $\gamma$  subunits in Chinese hamster ovary cells. *J. Biol. Chem.* 270: 25762-25770.
5. Chesla, S.E., Li, P., Nagarajan, S., Selvaraj, P. and Zhu, C. 2000. The membrane anchor influences ligand binding two-dimensional kinetic rates and three-dimensional affinity of Fc $\gamma$ RIII (CD16). *J. Biol. Chem.* 275: 10235-10246.

## CHROMOSOMAL LOCATION

Genetic locus: Fcgr4 (mouse) mapping to 1 H3.

## PRODUCT

CD16-2 siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see CD16-2 shRNA Plasmid (m): sc-42759-SH and CD16-2 shRNA (m) Lentiviral Particles: sc-42759-V as alternate gene silencing products.

For independent verification of CD16-2 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-42759A, sc-42759B and sc-42759C.

## STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

CD16-2 siRNA (m) is recommended for the inhibition of CD16-2 expression in mouse cells.

## SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10  $\mu$ M in 66  $\mu$ l. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

## GENE EXPRESSION MONITORING

CD16 (ASH 1975): sc-52376 is recommended as a control antibody for monitoring of CD16-2 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

## RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor CD16-2 gene expression knockdown using RT-PCR Primer: CD16-2 (m)-PR: sc-42759-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## RESEARCH USE

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

## PROTOCOLS

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