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R&D SYSTEMS

# Mouse SorCS3 Alexa Fluor® 532-conjugated Antibody

Monoclonal Rat $IgG_{2A}$ Clone # 339615
Catalog Number: FAB30671X
100 µg

## DESCRIPTION

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| **Species Reactivity** | Mouse |
| **Specificity** | Detects human and mouse SorCS3 in direct ELISAs and Western blots. In direct ELISAs and Western blots, no cross-reactivity with recombinant human SorCS1 is observed. |
| **Source** | Monoclonal Rat $IgG_{2A}$ Clone # 339615 |
| **Purification** | Protein A or G purified from hybridoma culture supernatant |
| **Immunogen** | Mouse myeloma cell line NS0-derived recombinant mouse SorCS3<br>Glu34-Ser1122<br>Accession # Q8VI51 |
| **Conjugate** | Alexa Fluor 532<br>Excitation Wavelength: 534 nm<br>Emission Wavelength: 553 nm |
| **Formulation** | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

## APPLICATIONS

**Please Note:** *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

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| **Western Blot** | Optimal dilution of this antibody should be experimentally determined. |
| **Immunohistochemistry** | Optimal dilution of this antibody should be experimentally determined. |

## PREPARATION AND STORAGE

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| **Shipping** | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| **Stability & Storage** | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied |

## BACKGROUND

SorCS3 is a type I transmembrane receptor of the mammalian Vps10p (vacuolar protein-sorting 10 protein) family of receptors that includes sortilin, SorLA, and three SorCS proteins (1, 2). It is synthesized as a 1219 amino acid (aa) preproform with a 33 aa signal sequence and a 100 aa propeptide. After proteolytic release of the propeptide at a furin-type consensus sequence, the mature SorCS3 is a 1086 aa, 100 - 110 kDa protein with a 992 aa extracellular/lumenal domain (ECD), a 21 aa transmembrane domain and a 73 aa cytoplasmic domain. Mouse SorCS3 ECD shares 98%, 92%, 91% and 89% aa identity with rat, human, bovine and canine SorCS3 ECD, respectively. It also shares 65% and 44% aa identity with mouse SorCS1 and SorCS2 ECD, respectively. The ECD contains an imperfect leucine-rich repeat (LRR) and a Vps10p domain that binds both pro- and mature NGF (2, 3). The metalloproteinase TACE/ADAM17 is able to cleave SorCS3 near the membrane either constitutively, or at an increased rate when induced by phorbol esters (4). The shed ECD is able to bind PDGF-BB and the NGF propeptide (4). Unlike sortilin, the SorCS3 propeptide has no known function; it does not block NGF binding or propeptide cleavage (3, 5). SorCS3 is predominantly expressed on the plasma membrane (3). It can be slowly internalized but, despite the presence of a sorting domain, there is no evidence for SorCS3-mediated intracellular trafficking activity (3). It is expressed in the embryonic and adult central nervous system in areas distinct from that of SorCS1 and SorCS2 (1). Neuronal activity upregulates SorCS3 expression in the hippocampus (1).

## PRODUCT SPECIFIC NOTICES

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