

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse SorCS3 in direct ELISAs and Western blots. In direct ELISAs, approximately 40% cross-reactivity with recombinant human SorCS3 is observed, approximately 7% cross-reactivity with recombinant mouse (rm) SorCS1 is observed, and less than 2% cross-reactivity with rmSorCS2 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse SorCS3 Ala131-Ser1122 Accession # Q8VI51
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

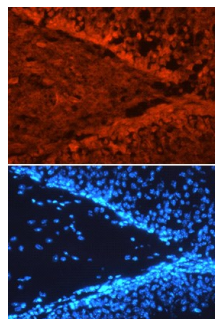
APPLICATIONS

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.

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Mouse SorCS3 (Catalog # 3067-SR)
Immunohistochemistry	5-15 µg/mL	See Below
Blockade of Receptor-ligand Interaction	In a functional ELISA, 1.5-6 µg/mL of this antibody will block 50% of the binding of 1 µg/mL of Recombinant Human β-NGF (Catalog # 256-GF) to immobilized Recombinant Mouse SorCS3 (Catalog # 3067-SR) coated at 4 µg/mL (100 µL/well). At 30 µg/mL, this antibody will block >90% of the binding.	

DATA

Immunohistochemistry



SorCS3 in Mouse Brain. SorCS3 was detected in immersion fixed frozen sections of mouse brain (hippocampus) using 10 µg/mL Goat Anti-Mouse SorCS3 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3067) overnight at 4 °C. Tissue was stained with the NorthernLights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red, upper panel; Catalog # NL001) and counterstained with DAPI (blue, lower panel). View our protocol for [Fluorescent IHC Staining of Frozen Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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/luminal domain (ECD), a 21 aa transmembrane domain and a 73 aa cytoplasmic domain. Mouse SorCS3 ECD shares 98%, 92%, 91%, and 89% aa sequence 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).

References:

1. Hermey, G. *et al.* (2004) *J. Neurochem.* **88**:1470.
2. Hampe, W. *et al.* (2001) *Hum. Genet.* **108**:529.
3. Westergaard, U.B. *et al.* (2005) *FEBS Lett.* **579**:1172.
4. Hermey, G. *et al.* (2006) *Biochem. J.* **395**:285.
5. Westergaard, U. *et al.* (2004) *J. Biol. Chem.* **279**:50221.