

Datasheet: AHP1164

Description:	RABBIT ANTI HUMAN SLC5A3 (C-TERMINAL)
Specificity:	SLC5A3 (C-TERMINAL)
Other names:	SMIT-1
Format:	Purified
Product Type:	Polyclonal Antibody
Isotype:	Polyclonal IgG
Quantity:	50 µg

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry			■	
Immunohistology - Frozen			■	
Immunohistology - Paraffin (1)	■			10 - 30 ug/ml
ELISA			■	
Immunoprecipitation			■	
Western Blotting			■	
Functional Assays			■	

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using appropriate negative/positive controls.

(1) This product requires antigen retrieval using heat treatment prior to staining of paraffin sections. Sodium citrate buffer pH 6.0 is recommended for this purpose.

Target Species	Human
Product Form	Purified IgG - liquid
Antiserum Preparation	Antisera to SLC5A3 were raised by repeated immunisations of rabbit with highly purified antigen. Purified IgG prepared by affinity chromatography.
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide (NaN ₃)
Approx. Protein Concentrations	IgG concentration 1.0mg/ml
Immunogen	Synthetic peptide corresponding to the C-terminal domain of human SLC5A3, conjugated to KLH.

**External Database
Links**

UniProt:

[P53794](#)

[Related reagents](#)

Entrez Gene:

[6526](#)

SLC5A3

[Related reagents](#)

Specificity

Rabbit anti Human SLC5A3 antibody detects epitopes within the C-terminal region of sodium-dependent myo-inositol cotransporter-1 (SLC5A3), also known as SMIT-1. SLC5A3 is a ~80 kDa membrane associated transporter which is expressed in many human tissues including the brain, kidney and placenta. It is up-regulated in hypertonic conditions and functions in cellular osmoregulation by regulating myo-inositol (MI) uptake. MI is the precursor for phosphatidylinositol and its derivatives, all of which have functions in signal transduction.

Up-regulation of SLC5A3 may be associated with an increased risk for bipolar I disorder, and is also thought to be a factor in the pathophysiology of Down syndrome.

**Histology Positive
Control Tissue**

Spinal cord.

Further Reading

1. Mallee, J.J. *et al.* (1997) The structural organization of the human Na⁺/myo-inositol cotransporter (SLC5A3) gene and characterization of the promoter. [Genomics. 46 \(3\): 459-65.](#)
2. Chau, J.F. *et al.* (2005) Sodium/myo-inositol cotransporter-1 is essential for the development and function of the peripheral nerves. [FASEB J. 19 \(13\): 1887-9.](#)
3. Willmroth, F. *et al.* (2007) Sodium-myoinositol co-transporter (SMIT-1) mRNA is increased in neutrophils of patients with bipolar 1 disorder and down-regulated under treatment with mood stabilizers. [Int J Neuropsychopharmacol. 10 \(1\): 63-71.](#)

Storage

Store at +4°C or at -20°C if preferred.

Storage in frost-free freezers is not recommended.

This product should be stored undiluted. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

Shelf Life

18 months from date of despatch.

**Health And Safety
Information**

Material Safety Datasheet documentation #10040 available at:

10040: <https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf>

Regulatory

For research purposes only

Related Products

Recommended Secondary Antibodies

Sheep Anti Rabbit IgG (STAR34...) [FITC](#)

Sheep Anti Rabbit IgG (STAR35...) [RPE](#)

Goat Anti Rabbit IgG (H/L) (STAR124...) [HRP](#)

Goat Anti Rabbit IgG (Fc) (STAR121...) [Biotin](#), [FITC](#), [HRP](#)

Sheep Anti Rabbit IgG (2AB02...) [Biotin](#)

Sheep Anti Rabbit IgG (STAR36...) [DyLight®488](#), [DyLight®549](#), [DyLight®649](#),
[DyLight®680](#), [DyLight®800](#)

Recommended Useful Reagents

[HISTAR DETECTION SYSTEM \(STAR3000A\)](#)

[HISTAR DETECTION SYSTEM \(STAR3000B\)](#)

[HISTAR DETECTION SYSTEM \(STAR3000C\)](#)

[ANTIGEN RETRIEVAL BUFFER, pH8.0 \(BUF025A\)](#)

[ANTIGEN RETRIEVAL BUFFER, pH8.0 \(BUF025C\)](#)

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