

## Datasheet: 4670-1704

<b>Description:</b>	RABBIT ANTI GLUCOSE TRANSPORTER 4
<b>Specificity:</b>	GLUCOSE TRANSPORTER 4
<b>Other names:</b>	GLUT4
<b>Format:</b>	Purified
<b>Product Type:</b>	Polyclonal Antibody
<b>Isotype:</b>	Polyclonal IgG
<b>Quantity:</b>	0.1 ml

## 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](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry			▪	
Immunohistology - Frozen	▪			
Immunohistology - Paraffin	▪			10 - 20 ug/ml
Immunoprecipitation			▪	
Western Blotting			▪	

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 the appropriate negative/positive controls.

### Target Species

Human

### Species Cross Reactivity

Reacts with: Mouse, Rat, Monkey

Does not react with: Pig

**N.B.** Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.

### Product Form

Purified IgG - liquid

### Preparation

Purified IgG prepared by affinity chromatography

### Buffer Solution

Phosphate buffered saline

<b>Preservative Stabilisers</b>	0.09% Sodium Azide (NaN <sub>3</sub> )
<b>Approx. Protein Concentrations</b>	5.0 mg/ml
<b>Immunogen</b>	A 12 amino acid peptide corresponding to the carboxyl terminus of the insulin regulatable glucose transporter conjugated to keyhole limpet hemocyanin.
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P14672</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">6517</a>    SLC2A4    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	GLUT4
<b>RRID</b>	AB_2270625
<b>Specificity</b>	<p><b>Rabbit anti Glucose Transporter 4 antibody</b> recognizes human Solute carrier family 2, facilitated glucose transporter member 4, also known as glucose transporter 4 or GLUT4. GLUT4 is a 509 amino acid ~50 kDa multi-pass transmembrane protein located primarily in the perinuclear region and is translocated to the plasma membrane where it is rapidly reinternalized. Rabbit anti Glucose Transporter 4 antibody does not react with HEP G2 type glucose transporter in human erythrocytes, rat brain or other tissues that do not exhibit sensitivity to insulin.</p> <p>GLUT4 is the insulin-regulated glucose transporter found in adipose tissue and striated muscle, responsible for glucose disposal. The stimulation of glucose uptake by insulin requires translocation of the GLUT4 glucose transporter from intracellular storage sites to the cell surface. Activation of phosphatidylinositol-3-OH kinase (PI3K) is required for this trafficking event, but it is not sufficient to produce GLUT4 translocation. Human insulin resistance involves a defect in GLUT4 traffic and targeting leading to accumulation in a dense membrane compartment from which insulin is unable to recruit GLUT4 to the cell surface.</p>
<b>References</b>	<ol style="list-style-type: none"> <li>1. James, D.E. <i>et al.</i> (1989) Molecular cloning and characterization of an insulin-regulatable glucose transporter. <a href="#">Nature. 338 (6210): 83-7.</a></li> <li>2. Durante, P.E. <i>et al.</i> (2002) Effects of endurance training on activity and expression of AMP-activated protein kinase isoforms in rat muscles. <a href="#">Am J Physiol Endocrinol Metab. 283 (1): E178-86.</a></li> <li>3. Chung, M.J. <i>et al.</i> (2010) Anti-diabetic effects of lemon balm ( <i>Melissa officinalis</i>) essential oil on glucose- and lipid-regulating enzymes in type 2 diabetic mice. <a href="#">Br J Nutr. 104 (2): 180-8.</a></li> <li>4. Ware, B. <i>et al.</i> (2011) Chronic heart failure selectively induces regional heterogeneity of insulin-responsive glucose transporters. <a href="#">Am J Physiol Regul Integr Comp Physiol. 301: R1300-6.</a></li> <li>5. Borghouts, L.B. <i>et al.</i> (2000) GLUT-4 expression is not consistently higher in type-1</li> </ol>

than in type-2 fibres of rat and human vastus lateralis muscles; an immunohistochemical study. [Pflugers Arch. 441:351-8.](#)

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9. Waller, A.P. *et al.* (2015) Sarcoplasmic reticulum Ca<sup>2+</sup> ATPase pump is a major regulator of glucose transport in the healthy and diabetic heart. [Biochim Biophys Acta. 1852 \(5\): 873-81.](#)

10. Kawamoto, E. *et al.* (2018) Immobilization rapidly induces thioredoxin-interacting protein (TXNIP) gene expression together with insulin resistance in rat skeletal muscle. [J Appl Physiol \(1985\). May 24 \[Epub ahead of print\].](#)

11. Kawamoto, E. *et al.* (2018) Immobilization rapidly induces thioredoxin-interacting protein gene expression together with insulin resistance in rat skeletal muscle. [J Appl Physiol \(1985\). 125 \(2\): 596-604.](#)

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<b>Storage</b>	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.
<b>Guarantee</b>	12 months from date of despatch
<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10040 available at: 10040: <a href="https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf">https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf</a>
<b>Regulatory</b>	For research purposes only

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## Related Products

### Recommended Secondary Antibodies

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

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

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

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

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

### Recommended Useful Reagents

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

[100x ANTIGEN RETRIEVAL BUFFER, pH8.0 \(BUF025C\)](#)

[TidyBlot WESTERN BLOT DETECTION REAGENT:HRP \(STAR209P\)](#)

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