

Datasheet for 100-401-GN3S**Glut2 Antibody****Overview**

Description:	Anti-Glut2 (RABBIT) Antibody - 100-401-GN3S
Item No.:	100-401-GN3S
Size:	25 µL
Applications:	ELISA, WB
Reactivity:	Mouse
Host Species:	Rabbit

Product Details**Background:**

The Anti-Glut2 antibody was designed, produced, and validated as part of the Joy Cappel Young Investigator Award (JCYIA). The glucose transporter GLUT2 is a transmembrane carrier protein that allows protein facilitated glucose movement across cell membranes. GLUT2 is expressed in the plasma membranes of the liver, intestine, renal tubular cells, pancreatic islet beta cells, as well as in the portal and hypothalamic areas. Due to its low affinity and high capacity, GLUT2 transports dietary sugars, glucose, galactose and fructose in high concentrations, displaying large bidirectional fluxes in and out of cells. In pancreatic beta cells, GLUT2 is essential for glucose-stimulated insulin secretion. GLUT2 expression is necessary for the physiological control of glucose-sensitive genes, and its inactivation in the liver leads to impaired glucose-stimulated insulin secretion. In the nervous system, GLUT2-dependent glucose sensing regulates feeding, thermoregulation and pancreatic islet cell mass and function, as well as sympathetic and parasympathetic activities. In humans, inactivating mutations in GLUT2 cause Fanconi–Bickel syndrome, which is characterized by hepatomegaly and kidney disease. Anti-Glut2 is ideal for researchers interested in studying glucose transport mediated by Glut2 protein in the fields of diabetes, obesity, metabolism, and neuroscience research.

Synonyms:	rabbit anti-Glut2 Antibody, Solute carrier family 2, facilitated glucose transporter member 2, Glucose transporter type 2, liver-GLUT-2, Slc2a2, Glut2 Antibody
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	Antiserum

Target Details

Gene Name:	Slc2a2
Reactivity:	Mouse
Immunogen Type:	Conjugated Peptide
Immunogen:	This antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to the C-terminal domain of mouse Glut2 protein.
Purity/Specificity:	Glut-2 antibody is directed against Glut2 protein. The product is delipidated and defibrinated antiserum. A BLAST analysis was used to suggest cross-reactivity with Glut2 from mouse and rat based on a 100% homology with the immunizing sequence. Reactivity against homologues from other sources is not known.
Relevant Links:	• UniProtKB - P14246 • NCBI - NP_112474.2 • GeneID - 20526

Application Details

Tested Applications:	ELISA, WB
Application Note:	Glut-2 antibody has been tested for use in ELISA and by western blot. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 57.1 kDa in size corresponding to Glut2 protein by western blotting in the appropriate stimulated tissue or cell lysate or extract. This antibody is suitable for immunohistochemistry.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:30,000-1:90:000
IHC:	4µg/mL
WB:	1:500-1:1000

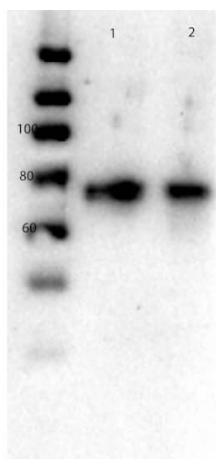
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	85 mg/mL by Refractometry
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.
Expiration:	Expiration date is one (1) year from date of receipt.

Images



Western Blot

Western Blot of Rabbit anti-Glut2 antibody. Lane 1: mouse liver lysate (p/n W10-000-T020). Lane 2: mouse pancreas lysate (p/n W10-000-T023). Load: 10µg per lane. Primary antibody: Glut2 antibody at 1:500 for overnight at 4°C. Secondary antibody: Peroxidase rabbit secondary antibody (p/n 611-103-122) at 1:40,000 for 30 min at RT. Block: 0.75% Casein/TBS (p/n MB-082) overnight at 4°C. Predicted/Observed size: 57.1 kDa.

References

- Chhabra et al. Hypothalamic POMC Deficiency Improves Glucose Tolerance Despite Insulin Resistance by Increasing Glycosuria. *Diabetes* (2016)

Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.