

Rabbit Glutaminase/GLS Polyclonal Antibody | anti-GLS antibody

Anti-Glutaminase/GLS Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA19239	Rabbit	Human, Mouse, Rat, Monkey	Western Blot, Immunohistochemistry, Immunocytochemistry, Immunofluorescence, Flow Cytometry, Functional Assay, ELISA

PRODUCT SYNONYMS

Glutaminase/GLS; Polyclonal Antibody; Anti-Glutaminase/GLS Antibody; Glutaminase kidney isoform; mitochondrial; GLS; K-glutaminase; L-glutamine amidohydrolase [Cleaved into: Glutaminase kidney isoform; mitochondrial 68 kDa chain; mitochondrial 65 kDa chain]; GLS1; KIAA0838; glutaminase; anti-GLS antibody

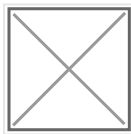
PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat, Monkey
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Rabbit IgG polyclonal antibody for Glutaminase/GLS detection.
Purity/Purification	Immunogen affinity purified.
Form/Format	Lyophilized. Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.01mg NaN3.
Applicable Applications for anti-GLS antibody	WB (Western Blot), IHC (Immunohistochemistry), ICC (Immunocytochemistry), IF (Immunofluorescence), FCM/FACS (Flow Cytometry), ELISA (Direct ELISA)
Application Notes	WB: 0.1-0.25ug/ml Human, Monkey, Mouse, Rat IHC-P: 0.5-1ug/ml Human, Rat ICC/IF: 4ug/ml Human FC/FACS/FCM: 1-3ug/1x106 cells Human Direct ELISA: 0.1-0.5ug/ml Human
Immunogen	E Coli-derived human Glutaminase/GLS recombinant protein (Position: K396-N654).
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
Recommended Detection Systems	Recommended Detection Systems
Preparation and Storage	Store at -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.



FCM (Flow Cytometry)

Figure 6. Flow Cytometry analysis of SiHa cells using anti-Glutaminase/GLS antibody (AAA19239). Overlay histogram showing SiHa cells stained with AAA19239 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Glutaminase/GLS Antibody (AAA19239, 1µg/1x10⁶ cells) for 30 min at 20 degree C. DyLight®488 conjugated goat anti-rabbit IgG (5-10µg/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1µg/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



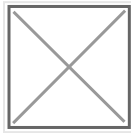
FCM (Flow Cytometry)

Figure 5. Flow Cytometry analysis of 293T cells using anti-Glutaminase/GLS antibody (AAA19239). Overlay histogram showing 293T cells stained with AAA19239 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Glutaminase/GLS Antibody (AAA19239, 1µg/1x10⁶ cells) for 30 min at 20 degree C. DyLight®488 conjugated goat anti-rabbit IgG (5-10µg/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1µg/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



IF (Immunofluorescence)

Figure 4. IF analysis of Glutaminase/GLS using anti-Glutaminase/GLS antibody (AAA19239). Glutaminase/GLS was detected in immunocytochemical section of U2OS cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 4µg/mL rabbit anti-Glutaminase/GLS Antibody (AAA19239) overnight at 4 degree C. DyLight®488 Conjugated Goat Anti-Rabbit IgG was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37 degree C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



IHC (Immunohistochemistry)

Figure 3. IHC analysis of Glutaminase/GLS using anti-Glutaminase/GLS antibody (AAA19239). Glutaminase/GLS was detected in paraffin-embedded section of rat brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1µg/mL rabbit anti-Glutaminase/GLS Antibody (AAA19239) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # with DAB as the chromogen).



IHC (Immunohistochemistry)

Figure 2. IHC analysis of Glutaminase/GLS using anti-Glutaminase/GLS antibody (AAA19239). Glutaminase/GLS was detected in paraffin-embedded section of human gastric cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1µg/mL rabbit anti-Glutaminase/GLS Antibody (AAA19239) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # with DAB as the chromogen).



WB (Western Blot)

Figure 1. Western blot analysis of Glutaminase/GLS using anti-Glutaminase/GLS antibody (AAA19239). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50µg of sample under reducing conditions. Lane 1: human placenta tissue lysates Lane 2: human U87 whole cell lysates Lane 3: human Hela whole cell lysates Lane 4: monkey kidney tissue lysates Lane 5: rat brain tissue lysates Lane 6: rat kidney tissue lysates Lane 7: rat heart tissue lysates Lane 8: rat skeletal muscle tissue lysates Lane 9: mouse brain tissue lysates Lane 10: mouse kidney tissue lysates Lane 11: mouse heart tissue lysates Lane 12: mouse skeletal muscle tissue lysates Lane 13: mouse Neuro-2a whole cell lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Glutaminase/GLS antigen affinity purified polyclonal antibody (Catalog # AAA19239) at 0.25 µg/mL overnight at 4 degree C, then washed with TBS-0.1% Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # with Tanon 5200 system). A specific band was detected for Glutaminase/GLS at approximately 65-73KD. The expected band size for Glutaminase/GLS is at 73KD.

ADDITIONAL INFORMATION

Related Product Information for anti-GLS antibody

This gene encodes the K-type mitochondrial glutaminase. The encoded protein is an phosphate-activated amidohydrolase that catalyzes the hydrolysis of glutamine to glutamate and ammonia. This protein is primarily expressed in the brain and kidney plays an essential role in generating energy for metabolism, synthesizing the brain neurotransmitter glutamate and maintaining acid-base balance in the kidney. Alternate splicing results in multiple transcript variants.

References	<ol style="list-style-type: none"> 1. Lynch, D. S., Chelban, V., Vandrovcova, J., Pittman, A., Wood, N. W., Houlden, H. GLS loss of function causes autosomal recessive spastic ataxia and optic atrophy. <i>Ann. Clin. Transl. Neurol.</i> 5: 216-221, 2018. 2. Modi, W. S., Pollock, D. D., Mock, B. A., Banner, C., Renauld, J. -C., Van Snick, J. Regional localization of the human glutaminase (GLS) and interleukin-9 (IL9) genes by in situ hybridization. <i>Cytogenet. Cell Genet.</i> 57: 114-116, 1991. 3. Rumping, L., Tessadori, F., Pouwels, P. J. W., Vringer, E., Wijnen, J. P., Bhogal, A. A., Savelberg, S. M. C., Duran, K. J., Bakkers, M. J. G., Ramos, R. J. J., Schellekens, P. A. W., Kroes, H. Y., and 16 others. GLS hyperactivity causes glutamate excess, infantile cataract and profound developmental delay. <i>Hum. Molec. Genet.</i> 28: 96-104, 2019.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	12643334
NCBI GeneID	2744
UniProt Accession #	O94925 ; Q9UL05 ; Q9UL06 ; Q9UL07 ; Q9UN40
Molecular Weight	669
NCBI Official Full Name	Glutaminase kidney isoform, mitochondrial
NCBI Official Synonym Full Names	glutaminase
NCBI Official Symbol	GLS
NCBI Official Synonym Symbols	GAC; GAM; KGA; GLS1; AAD20
NCBI Protein Information	glutaminase kidney isoform, mitochondrial; K-glutaminase; glutaminase C; L-glutamine amidohydrolase; glutaminase, phosphate-activated
UniProt Protein Name	Glutaminase kidney isoform, mitochondrial
UniProt Gene Name	GLS
UniProt Synonym Gene Names	GLS1; KIAA0838; GLS
UniProt Entry Name	GLSK_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/glutaminase-gls-antibody-western-blot-immunohistochemistry-immunocytochemistry-immunofluorescence-flow-cytometry-direct-elisa-elisa/19239>