

# Product Datasheet

## GART Antibody (4D6-1D5) - Azide and BSA Free H00002618-M01

Unit Size: 0.1 mg

Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.

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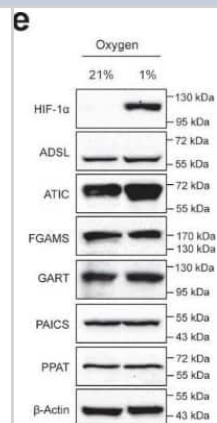
**H00002618-M01**

GART Antibody (4D6-1D5) - Azide and BSA Free

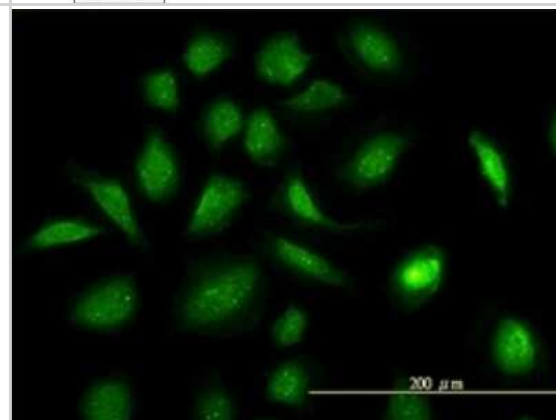
Product Information	
<b>Unit Size</b>	0.1 mg
<b>Concentration</b>	Concentrations vary lot to lot. See vial label for concentration. If unlisted please contact technical services.
<b>Storage</b>	Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.
<b>Clonality</b>	Monoclonal
<b>Clone</b>	4D6-1D5
<b>Preservative</b>	No Preservative
<b>Isotype</b>	IgG1 Kappa
<b>Purity</b>	IgG purified
<b>Buffer</b>	In 1x PBS, pH 7.4
Product Description	
<b>Description</b>	Quality control test: Antibody Reactive Against Recombinant Protein.
<b>Host</b>	Mouse
<b>Gene ID</b>	2618
<b>Gene Symbol</b>	GART
<b>Species</b>	Human, Mouse
<b>Specificity/Sensitivity</b>	GART - phosphoribosylglycinamide formyltransferase, phosphoribosylglycinamide synthetase, phosphoribosylaminoimidazole synthetase
<b>Immunogen</b>	GART (AAH38958.1, 1 a.a. ~ 433 a.a) full-length recombinant protein with GST tag. MW of the GST tag alone is 26 KDa. MAARVLIIGSGGREHTLAWKLAQSHHVQVQVLPVAPGNAGTACSEKISNTAISID HTALAQFCKEKKIEFVVVGPEAPLAAGIVGNLRSAGVQCFCGPTAEAAQLESSKR FAKEFMDRHGIPTAQWKAFTKPEEACSFILSADFPALVVKASGLAAGKGVIVAK SKEEACKAVQEIMQEKAFGAAGETIVIEELLDGEEVSCLCFTDVGKTVAPMPPAQ DHKRLLLEGDGGPNTGGMGAYCPAPQVSNLLLLKIKDTVLQRTVDGMQQEGTP YTGILYAGIMLTKNGPKVLEFNCRFGDPECQVILPLLKSDLYEVIQSTLDGLLCTS LPVWLENHTALTVMASKGYPGDYTKGVEITGFPEAQALGLEVFHAGTALKNG KVVTHGGRVLAVTAIRENLISALEEAKKGLAAIKFEGAIYRKDVGFRAIAFLQQPR
<b>Notes</b>	This product is produced by and distributed for Abnova, a company based in Taiwan.
Product Application Details	
<b>Applications</b>	Western Blot, ELISA, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin, Immunoprecipitation, Proximity Ligation Assay
<b>Recommended Dilutions</b>	Western Blot 1:500, ELISA, Immunohistochemistry, Immunocytochemistry/ Immunofluorescence, Immunoprecipitation, Immunohistochemistry-Paraffin, Proximity Ligation Assay
<b>Application Notes</b>	Antibody reactivity against recominant protein, transfected lysate and cell lysate for WB. It has been used for IF, IHC-P and ELISA. Use in PLA reported in scitific publication PMID: 32439803

## Images

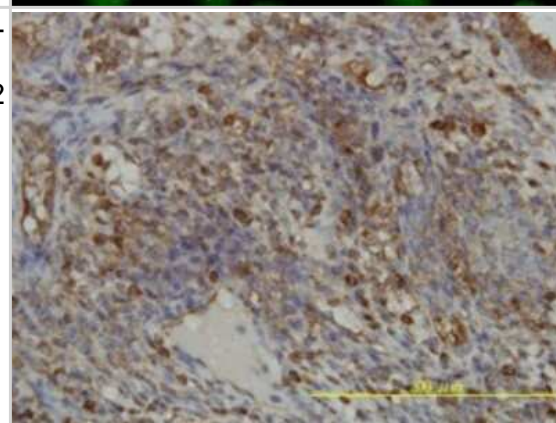
Western Blot: GART Antibody (4D6-1D5) [H00002618-M01] - Blot showing the effect of hypoxia on the protein expression levels of the purine biosynthetic enzymes. HIF-1 alpha is stabilized in hypoxia as expected, and no significant increase in the purine enzymes was detected between normoxic (21% oxygen) and hypoxic (1% oxygen) growth conditions. The positions of molecular markers surrounding each band of interest are shown for each blot. ADSL (NBP2-03107), ATIC (NBP2-01941), FGAMS (NBP1-84691), GART (H00002618-M01), HIF-1a (NB100-449), PAICS (NBP2-02817), PPAT (NBP2-02056). Image collected and cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/32439803/>) licensed under a CC-BY license.



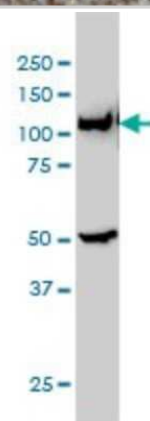
Immunocytochemistry/Immunofluorescence: GART Antibody (4D6-1D5) [H00002618-M01] - Analysis of monoclonal antibody to GART on HeLa cell. Antibody concentration 10 ug/ml.



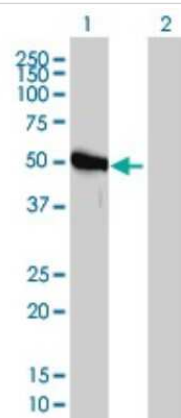
Immunohistochemistry-Paraffin: GART Antibody (4D6-1D5) [H00002618-M01] - Analysis of monoclonal antibody to GART on formalin-fixed paraffin-embedded human endometrium tissue. Antibody concentration 2 ug/ml.



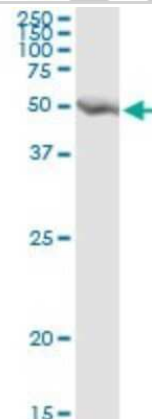
Western Blot: GART Antibody (4D6-1D5) [H00002618-M01] - GART monoclonal antibody (M01), clone 4D6-1D5 Analysis of GART expression in Hela S3 NE.



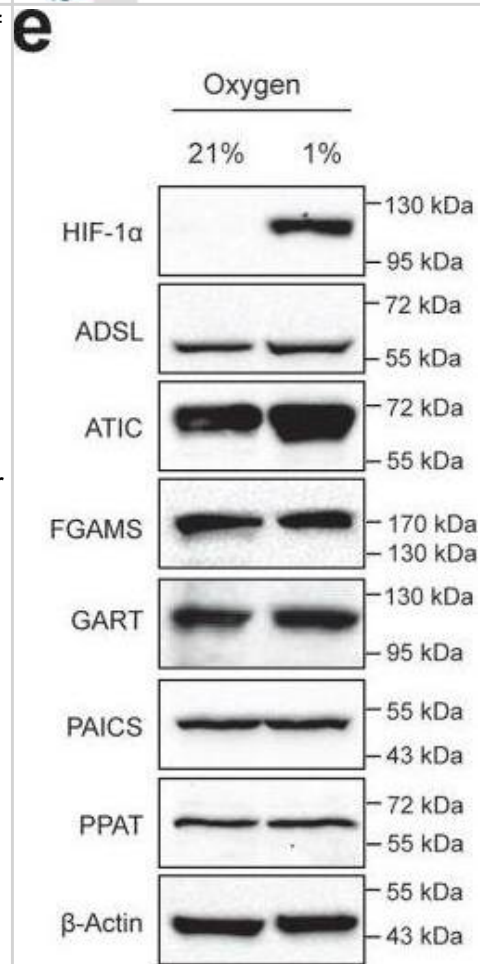
Western Blot: GART Antibody (4D6-1D5) [H00002618-M01] - Analysis of GART expression in transfected 293T cell line by GART monoclonal antibody (M01), clone 4D6-1D5. Lane 1: GART transfected lysate(46 KDa). Lane 2: Non-transfected lysate.



Immunoprecipitation: GART Antibody (4D6-1D5) [H00002618-M01] - Analysis of GART transfected lysate using anti-GART monoclonal antibody and Protein A Magnetic Bead, and immunoblotted with GART MaxPab rabbit polyclonal antibody.



Western Blot: GART Antibody (4D6-1D5) [H00002618-M01] - The role of HIF-1 in purinosome formation. a, quantifying the number of purinosome-containing cells in normoxia or hypoxia (24 h) in purine-rich medium & normoxia in purine-depleted medium (purine -ve), cells in hypoxia transfected with siRNA to HIF-1 $\alpha$  (+ siRNA), & cells in purine-rich medium supplemented with DFX. Data shown are n = 3, mean  $\pm$  S.E., total number of cells counted are shown in parentheses. b, time course of purinosome formation in hypoxia shows the number of purinosome-containing cells steadily increases after 3 h in hypoxia. Re-oxygenation of the samples after hypoxic incubation for 10 h reverts the number purinosome-containing cells back to normoxic levels. Data shown is n = 3, mean  $\pm$  S.E., total number of cells counted are shown in parentheses. c, time course of HIF-1 $\alpha$  stabilization in hypoxia shows maximum HIF-1 $\alpha$  protein expression levels at 3 h in hypoxia, after which the HIF-1 $\alpha$  expression decreases. The positions of molecular markers are shown for each blot; uncropped blots with overlaid markers are deposited in the raw data files. d, the effect of hypoxia on the transcription of purine biosynthesis enzymes measured by qPCR. Vascular endothelial growth factor (VEGF) & HIF-1 $\alpha$  are controls. Data shown are n = 5, mean  $\pm$  S.E. e, the effect of hypoxia on the protein expression levels of the purine biosynthetic enzymes. HIF-1 $\alpha$  is stabilized in hypoxia as expected, & no significant increase in the purine enzymes was detected between normoxic (21% oxygen) & hypoxic (1% oxygen) growth conditions. The positions of molecular markers surrounding each band of interest are shown for each blot; uncropped blots with overlaid markers are deposited in the raw data files. Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/32439803>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



**Publications**

Doigneaux C, Pedley AM, Mistry IN et al. Hypoxia Drives the Assembly of the Multi-Enzyme Purinosome Complex J. Biol. Chem. 2020-05-21 [PMID: 32439803] (PLA, Human)

Severi L, Losi L, Fonda S et al. Proteomic and Bioinformatic Studies for the Characterization of Response to Pemetrexed in Platinum Drug Resistant Ovarian Cancer. Front Pharmacol 2018-05-08 [PMID: 29867465]

Pedley AM, Benkovic SJ. Detecting Purinosome Metabolon Formation with Fluorescence Microscopy. Methods Mol. Biol. 2018-04-02 [PMID: 29605921] (ICC/IF, Human)

Baresova V, Krijt M, Skopova V et al. CRISPR-Cas9 induced mutations along de novo purine synthesis in HeLa cells result in accumulation of individual enzyme substrates and affect purinosome formation. Mol Genet Metab 2016-08-24 [PMID: 27590927]

Banerjee D, Ghosh D, Chatterjee A et al. No Evidence for Mutations that Deregulate GARS-AIRS-GART Protein Levels in Children with Down Syndrome. Ind J Clin Biochem. 2012-01-01 [PMID: 23277712]

Field MS, Anguera MC, Page R, Stover PJ. 5,10-Methenyltetrahydrofolate Synthetase Activity is Increased in Tumors and Modifies the Efficacy of Antipurine LY309887. Arch Biochem Biophys. 2008-11-17 [PMID: 19022216]

Noelker C, Schwake M, Balzer-Geldsetzer M et al. Differentially expressed gene profile in the 6-hydroxy-dopamine-induced cell culture model of Parkinson's disease. Neurosci Lett 2011-12-01 [PMID: 22155091]

Genovese F, Gualandi A, Taddia L et al. Mass Spectrometric/Bioinformatic Identification of a Protein Subset That Characterizes the Cellular Activity of Anticancer Peptides. J Proteome Res 2014-09-29 [PMID: 25196676]

Zhao A, Tsechansky M, Swaminathan J et al. Transiently Transfected Purine Biosynthetic Enzymes Form Stress Bodies. PLoS One 2013-01-01 [PMID: 23405267] (ICC/IF, Human)





### **Novus Biologicals USA**

10730 E. Briarwood Avenue  
Centennial, CO 80112  
USA  
Phone: 303.730.1950  
Toll Free: 1.888.506.6887  
Fax: 303.730.1966  
nb-customerservice@bio-techne.com

### **Bio-Techne Canada**

21 Canmotor Ave  
Toronto, ON M8Z 4E6  
Canada  
Phone: 905.827.6400  
Toll Free: 855.668.8722  
Fax: 905.827.6402  
canada.inquires@bio-techne.com

### **Bio-Techne Ltd**

19 Barton Lane  
Abingdon Science Park  
Abingdon, OX14 3NB, United Kingdom  
Phone: (44) (0) 1235 529449  
Free Phone: 0800 37 34 15  
Fax: (44) (0) 1235 533420  
info.EMEA@bio-techne.com

### **General Contact Information**

www.novusbio.com  
Technical Support: nb-technical@bio-techne.com  
Orders: nb-customerservice@bio-techne.com  
General: novus@novusbio.com

### **Products Related to H00002618-M01**

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HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB720-B	Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin]
NBP1-43319-0.5mg	Mouse IgG1 Kappa Isotype Control (P3.6.2.8.1)
H00002618-P01-10ug	Recombinant Human GART GST (N-Term) Protein

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### **Limitations**

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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