

# Product Datasheet

## HLA G Antibody (MEM-G/1) - BSA Free NB500-302

Unit Size: 0.1 mg

Store at 4C. Do not freeze.

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**NB500-302**

HLA G Antibody (MEM-G/1) - BSA Free

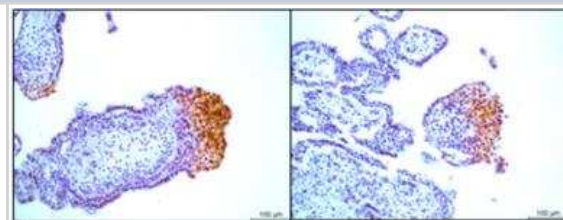
Product Information	
Unit Size	0.1 mg
Concentration	1 mg/ml
Storage	Store at 4C. Do not freeze.
Clonality	Monoclonal
Clone	MEM-G/1
Preservative	0.9% Sodium Azide
Isotype	IgG1
Purity	Protein A purified
Buffer	PBS (pH 7.4)

Product Description	
Host	Mouse
Gene ID	3135
Gene Symbol	HLA-G
Species	Human
Specificity/Sensitivity	The antibody MEM-G/1 reacts with denaturated HLA-G heavy chain. HLA-G belongs to the MHC Class I molecules (MHC Class Ib; nonclassical) and it is expressed on the surface of trophoblast cells.
Immunogen	HLA-A2.1/human beta2-microglobulin double transgenic mice were immunized with murine L cells transfected with both human beta2-microglobulin and HLA G Antibody (G233)

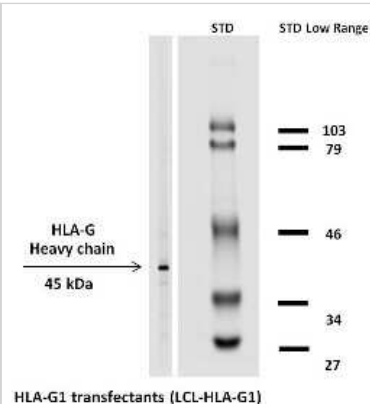
Product Application Details	
Applications	Western Blot, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin
Recommended Dilutions	Western Blot 1-2 ug/ml, Immunohistochemistry 1:60 - 1:100, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry-Paraffin 1:60 - 1:100, Immunohistochemistry-Frozen
Application Notes	Immunohistochemistry (paraffin sections) incubation: 1 h at RT; positive tissue: human placenta - extravillous cytotrophoblast, heat retrieval in 0.01M citrate buffer (4x2 min. in microwave oven). Use in ICC/IF reported in scientific literature (PMID: 27849611).

**Images**

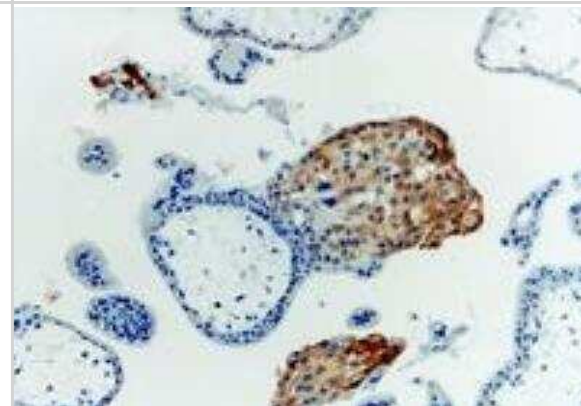
Immunohistochemistry: HLA G Antibody (MEM-G/1) [NB500-302] - ELA affects first trimester placental explant trophoblast proliferation. HLA-G immunostaining (brown color) indicates the location of extravillous trophoblasts. In control explants (left panel) almost all villous cytotrophoblasts proliferate, while this is much less apparent in explants treated with ELA (0.25nM, right panel). Image collected and cropped by CiteAb from the following publication (<https://www.nature.com/articles/s41598-019-55650-5>) licensed under a CC-BY license.



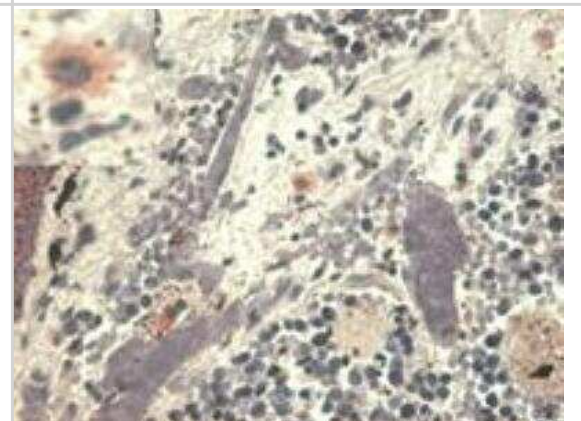
Western Blot: HLA G Antibody (MEM-G/1) [NB500-302] - Using the Biotin direct conjugate analysis (reducing conditions) of HLA-G1 in HLA-G1 transfectants using the antibody MEM-G/1 biotin.



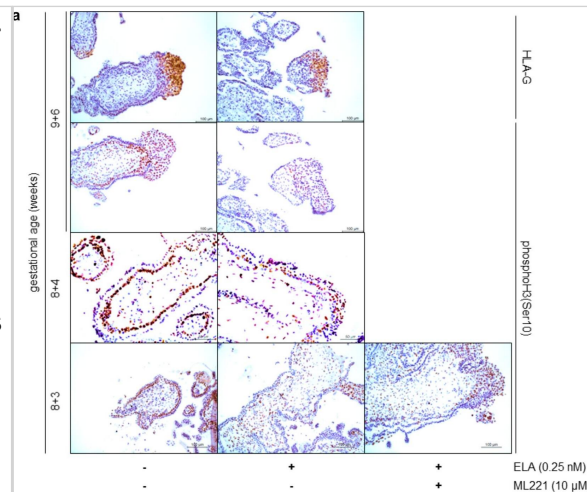
Immunohistochemistry: HLA G Antibody (MEM-G/1) [NB500-302] - Fig. 1B - first-trimester placenta (paraffin-embedded sections)



Immunohistochemistry: HLA G Antibody (MEM-G/1) [NB500-302] - Fig. 1. Immunohistochemistry staining with anti-human HLA-G (MEM-G/1). Fig. 1A - pulmonary diseases (paraffin-embedded sections) The antibody MEM-G/1 stains infiltrating macrophages in pulmonary diseases. In the top left corner see the detail of macrophage.



Immunohistochemistry: HLA G Antibody (MEM-G/1) - BSA Free [NB500-302] - ELA affects first trimester placental explant trophoblast proliferation. (a) HLA-G immunostaining (brown color top panel) indicates the location of extravillous trophoblasts. PhosphoH3(Ser10) immunostaining (brown color lower 3 panels) identifies proliferating cells undergoing mitosis. In extravillous trophoblasts of explants treated with ELA proliferation appears to decrease. In control explants almost all villous cytotrophoblasts proliferate, while this is much less apparent in explants treated with ELA. Treatment with ELA in combination with ML221 does not return villous cytotrophoblast proliferation to the level as seen in control explants. (b) Quantifying the percentage of proliferating extravillous trophoblasts observed by immunohistochemistry shows a significant decrease upon treatment with ELA which cannot be rescued by the addition of ML221.  $P = 0.08$  between controls & explants treated with ELA & ML221.  $n = 12$  placentas, 5 explants per treatment. Bars represent mean  $\pm$  SEM & data was tested with one-way ANOVA followed by Bonferroni multiple comparisons test. \*Indicates  $p < 0.05$ . (c) Treatment of explants with an ELA neutralizing antibody shows a significant increase of extravillous trophoblast proliferation upon quantifying immunohistochemistry stainings.  $n = 4$  placentas, 5 explants per treatment. Bars represent mean  $\pm$  SEM & data was tested with a Student's t-test. \*Indicates  $p < 0.05$ . Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/31836787>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



## Publications

Philipp Velicky, Karin Windsperger, Karin Petroczi, Sophie Pils, Birgit Reiter, Tamara Weiss, Sigrid Vondra, Robin Ristl, Sabine Dekan, Christian Fiala, David E. Cantonwine, Thomas F. McElrath, Bernd Jilma, Martin Knöfler, Thomas Boehm, Jürgen Pollheimer Pregnancy-associated diamine oxidase originates from extravillous trophoblasts and is decreased in early-onset preeclampsia *Scientific Reports* 2018-04-20 [PMID: 29679053]

Philipp Velicky, Gudrun Meinhardt, Kerstin Plessl, Sigrid Vondra, Tamara Weiss, Peter Haslinger, Thomas Lendl, Karin Aumayr, Mario Mairhofer, Xiaowei Zhu, Birgit Schütz, Roberta L. Hannibal, Robert Lindau, Beatrix Weil, Jan Ernerudh, Jürgen Neesen, Gerda Egger, Mario Mikula, Clemens Röhr, Alexander E. Urban, Julie Baker, Martin Knöfler, Jürgen Pollheimer, Stefan Mundlos Genome amplification and cellular senescence are hallmarks of human placenta development *PLoS Genetics* 2018-10-12 [PMID: 30312291]

Liyan Duan, Beatrix Reisch, Antonella Iannaccone, Elina Hadrovic, Yuqing Wu, Rebekka Vogtmann, Elke Winterhager, Rainer Kimmig, Angela Köninger, Pawel Mach, Alexandra Gellhaus Abnormal expression of the costimulatory molecule B7-H4 in placental chorionic villous and decidual basalis tissues of patients with preeclampsia and HELLP syndrome. *American journal of reproductive immunology (New York, N.Y. : 1989)* 2022-01-25 [PMID: 33864713]

Georgiadou D, Boussata S, Keijser R et al. Knockdown of Splicing Complex Protein PCBP2 Reduces Extravillous Trophoblast Differentiation Through Transcript Switching *Frontiers in Cell and Developmental Biology* 2021-05-20 [PMID: 34095140] (Immunohistochemistry)

Georgiadou D, Boussata S, Ranzijn WHM, et al. Peptide hormone ELABELA enhances extravillous trophoblast differentiation, but placenta is not the major source of circulating ELABELA in pregnancy *Sci Rep* 2019-12-13 [PMID: 31836787] (IF/IHC, Human)

Haider S, Meinhardt G, Saleh L et al. Notch1 controls development of the extravillous trophoblast lineage in the human placenta. *Proc Natl Acad Sci U S A* 2016-11-29 [PMID: 27849611] (WB, IHC-P, ICC/IF, Human)

Haider S, Meinhardt G, Velicky P et al. Notch signaling plays a critical role in motility and differentiation of Human first trimester cytotrophoblasts. *Endocrinology*. 2013-11-04 [PMID: 24189144] (WB, Human)



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### **Products Related to NB500-302**

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HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB720-B	Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin]
NBP1-97005-0.5mg	Mouse IgG1 Isotype Control (MG1)
NBP2-61457-20ug	Recombinant Human HLA G His Protein

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### **Limitations**

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