Product Datasheet

MHC Class II RT1B Antibody (OX-6) - BSA Free
NB100-65541

Unit Size: 0.25 mg

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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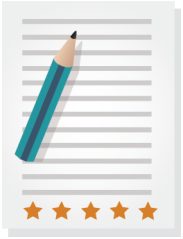


NB100-65541

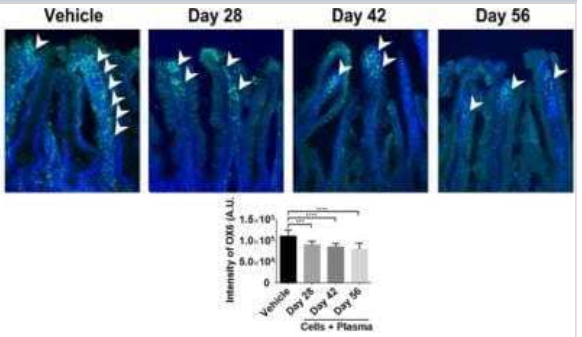
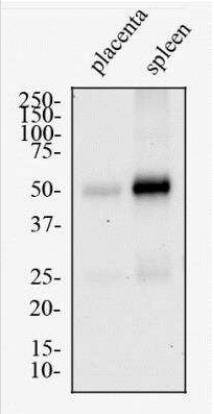
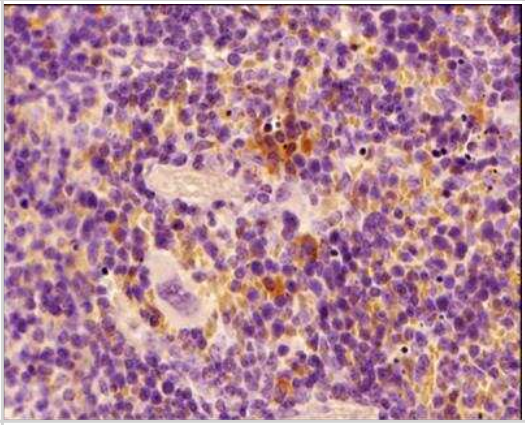
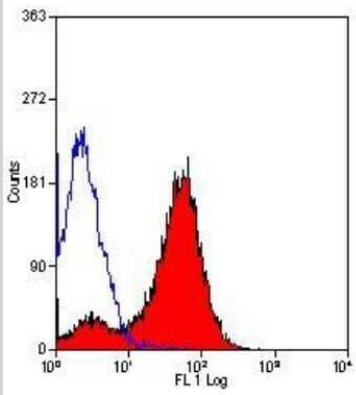
MHC Class II RT1B Antibody (OX-6) - BSA Free

Product Information	
Unit Size	0.25 mg
Concentration	1.0 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	OX-6
Preservative	0.02% Sodium Azide
Isotype	IgG1
Purity	Protein G purified
Buffer	PBS

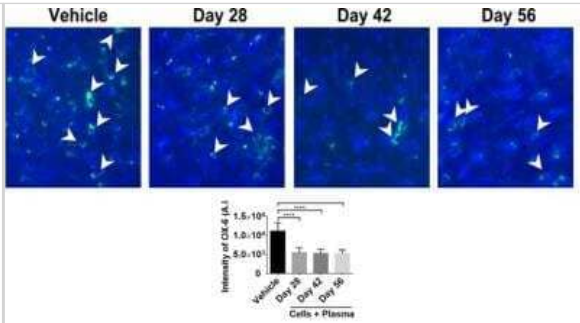
Product Description	
Host	Mouse
Gene ID	24738
Gene Symbol	RT1-B
Species	Mouse, Rat
Reactivity Notes	Please note that this antibody is reactive to Mouse and derived from the same host, Mouse. Additional Mouse on Mouse blocking steps may be required for IHC and ICC experiments. Please contact Technical Support for more information.
Specificity/Sensitivity	NB100-65541 recognizes a monomorphic determinant of the rat I-A antigen present on B lymphocytes, dendritic cells, some macrophages and certain epithelial cells. This antibody cross reacts with certain mouse strains of MHC haplotypes k and s. This antibody does not react with C57BL6 or C57BL6/j mice because they are haplotype b. Analysis of recombinant mouse strains showed that the determinants mapped to the I-A region. The clone does not react with Rat BDIX strain. Please be aware of the possible size variance seen in western blot.
Immunogen	Rat thymocyte membrane glycoproteins

Product Application Details	
Applications	Western Blot, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry-Paraffin, CyTOF-ready, Immunohistochemistry Free-Floating
Recommended Dilutions	Western Blot 1:100-1:2000, Flow Cytometry 1:50-1:100, Immunohistochemistry 1:10-1:500, Immunocytochemistry/ Immunofluorescence 1:10-1:500, Immunohistochemistry-Paraffin 1:50-1:100, Immunohistochemistry-Frozen 1:10-1:500, Immunohistochemistry Free-Floating reported in scientific literature (PMID 31317505), CyTOF-ready
Application Notes	For IHC-Paraffin: This product requires antigen retrieval using heat treatment prior to staining of paraffin sections. Sodium citrate buffer pH 6.0 is recommended for this purpose. PLP fixation is recommended for optimal results. This antibody is CyTOF ready.

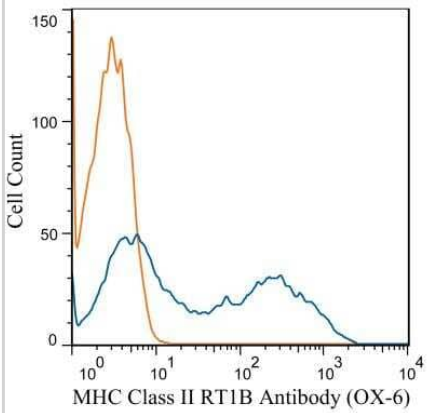
Images

Immunohistochemistry: MHC Class II RT1B Antibody (OX-6) [NB100-65541] - Administration of cord blood cells with plasma in the 6-OHDA PD rat model: Assessment of immune cell activation, and pro-inflammatory cytokine production in the intestine. Confocal imaging shows a significant reduction in OX-6 (MHC II) expression in the intestinal mucosa of 6-OHDA animals that were given a combination of cord blood cells and plasma. Representative merged images above show co-localization of OX-6 (Green) with DAPI+ (Blue) expression from cells in the small intestine of 6-OHDA PD animals. Arrow heads indicate positive staining of OX-6 expression in intestinal villi. Image collected and cropped by Citeab from the following publication (A Gutsy Move for Cell-Based Regenerative Medicine in Parkinson's Disease: Targeting the Gut Microbiome to Sequester Inflammation and Neurotoxicity. Stem Cell Rev Rep (2019) licensed under a CC-BY license.	
Western Blot: MHC Class II RT1B Antibody (OX-6) [NB100-65541] - Total protein from mouse placenta and spleen was separated on a 12% gel by SDS-PAGE, transferred to PVDF membrane and blocked in 5% non-fat milk in TBST. The membrane was probed with 2.0 ug/ml anti-RT1b in 1% milk, and detected with an anti-mouse HRP secondary antibody using chemiluminescence.	
Immunohistochemistry-Paraffin: MHC Class II RT1B Antibody (OX-6) [NB100-65541] - IHC analysis of a formalin fixed and paraffin embedded tissue section of mouse spleen using MHC Class II RT1B antibody (clone OX-6) at 1:100 dilution. The signal was developed using HRP-labelled secondary antibody and DAB reagent, and the nuclei were counterstained with hematoxylin. The antibody generated very specific signal in a subset of spleenocytes.	
Flow Cytometry: MHC Class II RT1B Antibody (OX-6) [NB100-65541] - Staining of rat spleen cells.	

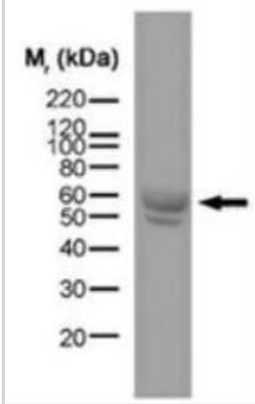
Immunohistochemistry: MHC Class II RT1B Antibody (OX-6) [NB100-65541] - Analysis of fluorescent intensity revealed significant protection and retention of dopaminergic cells in the SNpc in 6-OHDA animals treated with cord blood cells and plasma, compared to vehicle controls. Cord blood treated groups also demonstrated significant reductions immune cell activation (OX-6). Overall, the combination of cord blood cells and plasma can significantly modulate the exacerbated immune response through downregulation of pro-inflammatory cytokine production and immune cell activation in the 6-OHDA rat model at all time points tested. Image collected and cropped by Citeab from the following publication (A Gutsy Move for Cell-Based Regenerative Medicine in Parkinson's Disease: Targeting the Gut Microbiome to Sequester Inflammation and Neurotoxicity. Stem Cell Rev Rep (2019) licensed under a CC-BY license.



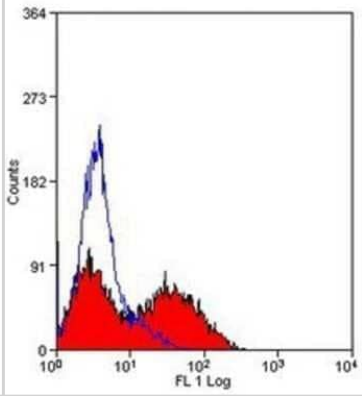
Flow Cytometry: MHC Class II RT1B Antibody (OX-6) [NB100-65541] - Analysis using Alexa Fluor (R) 488 conjugate of NB100-65541. Rat Splenocytes were stained with MHC Class II RT1B (OX-6) antibody NB100-65541 (blue) and a matched isotype control NBP2-27287 (orange). Cells were incubated in an antibody dilution of 1 ug/mL for 20 minutes at room temperature. The antibodies were directly conjugated to Alexa Fluor 488.

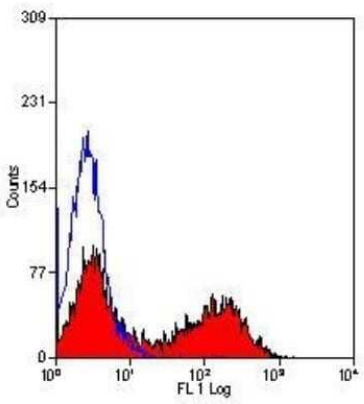
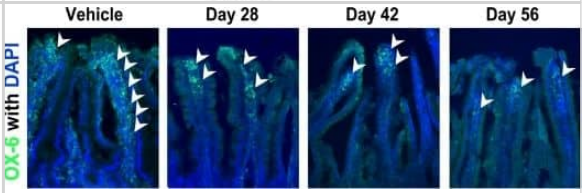
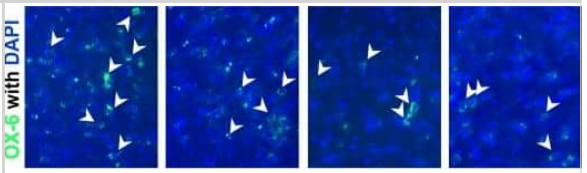


Western Blot: MHC Class II RT1B Antibody (OX-6) [NB100-65541] - Rat Spleen Tissue lysate probed with MHC Class II antibody.



Flow Cytometry: MHC Class II RT1B Antibody (OX-6) - BSA Free [NB100-65541] - Staining of rat splenocytes with Mouse anti Rat MHC class II RT1B



Flow Cytometry: MHC Class II RT1B Antibody (OX-6) - BSA Free [NB100-65541] - Staining of rat spleen cells.	
Immunocytochemistry/ Immunofluorescence: MHC Class II RT1B Antibody (OX-6) - BSA Free [NB100-65541] - Administration of cord blood cells with plasma in the 6-OHDA PD rat model: Assessment of immune cell activation, & pro-inflammatory cytokine production in the intestine. Confocal imaging shows a significant reduction in OX-6 (MHC II) expression in the intestinal mucosa of 6-OHDA animals that were given a combination of cord blood cells & plasma. This therapy also resulted in a significant decrease in TNF expression in this animal model. Quantitative analyses of the estimated OX-6 expression & TNF are displayed in the graphs above. Representative merged images above show co-localization of OX-6 (Green) or TNF (Red) with DAPI+ (Blue) expression from cells in the small intestine of 6-OHDA PD animals. Arrow heads indicate positive staining of OX-6 & TNF expression in intestinal villi. Scale bar = 100 µm Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/31317505), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	
Immunocytochemistry/ Immunofluorescence: MHC Class II RT1B Antibody (OX-6) - BSA Free [NB100-65541] - Administration of cord blood cells with plasma in the 6-OHDA PD rat model: Assessment of TH-positive dopaminergic neurons, immune cell activation, & pro-inflammatory cytokine production. Tyrosine hydroxylase (TH) staining (top row) was used to investigate the potential effect of combined cord blood cell with plasma injection on dopaminergic neuron populations in the substantia nigra pars compacta (SNpc). Analysis of fluorescent intensity revealed significant protection & retention of dopaminergic cells in the SNpc in 6-OHDA animals treated with cord blood cells & plasma, compared to vehicle controls. Cord blood treated groups also demonstrated significant reductions immune cell activation (OX-6) & pro-inflammatory cytokine production (TNF). Overall, the combination of cord blood cells & plasma can significantly modulate the exacerbated immune response through downregulation of pro-inflammatory cytokine production & immune cell activation in the 6-OHDA rat model at all time points tested. Photomicrographs correspond to representative SN in coronal sections immune-labeled with TH, OX-6 or TNF antibody. Scale bar = 50 µm Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/31317505), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	

Publications

Lee JY, Wang ZJ, Moscatello A et al. Inflammatory gut as a pathologic and therapeutic target in Parkinson's disease Cell Death Discovery 2022-09-24 [PMID: 36153318]

Lee JY, Castelli V, Sanberg PR, Borlongan CV. Probing Gut Participation in Parkinson's Disease Pathology and Treatment via Stem Cell Therapy International Journal of Molecular Sciences 2023-06-25 [PMID: 37445778] (Immunohistochemistry-Frozen, Immunocytochemistry/ Immunofluorescence)

Kingsbury C, Shear A, Heyck M Et al. Inflammation-relevant microbiome signature of the stroke brain, gut, spleen, and thymus and the impact of exercise Journal of cerebral blood flow and metabolism : official journal of the International Society of Cerebral Blood Flow and Metabolism 2021-08-24 [PMID: 34427146] (IF/IHC, Rat)

Lee JY, Tuazon JP, Corey S et al. A Gutsy Move for Cell-Based Regenerative Medicine in Parkinson's Disease: Targeting the Gut Microbiome to Sequester Inflammation and Neurotoxicity Stem Cell Rev 2019-07-17 [PMID: 31317505] (IHC-FrFl, Rat)

Lee JY, Tuazon JP, Ehrhart J, et al. Gutting the brain of inflammation: A key role of gut microbiome in human umbilical cord blood plasma therapy in Parkinson's disease model J. Cell. Mol. Med. 2019-05-31 [PMID: 31148353] (ICC/IF, Rat)

Barreto-Vianna ARC, Aguila MB, Mandarim-de-Lacerda CA. Beneficial effects of liraglutide (GLP1 analog) in the hippocampal inflammation Metab Brain Dis 2017-07-05 [PMID: 28681199] (Mouse)

Oh SH, Jorgensen ML, Wasserfall CH et al. Suppression of islet homeostasis protein thwarts diabetes mellitus progression. Lab. Invest. 2017-02-20 [PMID: 28218739] (ICC/IF, Mouse)

Khaldoyanidi S, Schnabel D, Fohr N, Zoller M. Functional activity of CD44 isoforms in haemopoiesis of the rat. Br J Haematol. [PMID: 9012685] (FLOW, Rat)

Stumbles PA, Thomas JA et al. Resting respiratory tract dendritic cells preferentially stimulate T helper cell type 2 (Th2) responses and require obligatory cytokine signals for induction of Th1 immunity. J Exp Med. [PMID: 9841916] (FLOW, Rat)

Lazo PA, Klein-Szanto AJ, Tsichlis PN. T-cell lymphoma lines derived from rat thymomas induced by Moloney murine leukemia virus: phenotypic diversity and its implications. J Virol. [PMID: 2196385] (FLOW, Rat)

Safaiyan S, Kannaiyan N, Snaidero N et al. Age-related myelin degradation burdens the clearance function of microglia during aging. Nat. Neurosci. 2016-06-13 [PMID: 27294511]

Boots AM, van Lierop MJ, Wauben MH et al. CD4 rat x rat and mouse x rat T cell hybridomas produced by fusion of established T cell lines and clones to W/Fu (C58NT)D. J Immunol Methods. [PMID: 1960397]

More publications at http://www.novusbio.com/NB100-65541

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NB100-65541AF488	MHC Class II RT1B Antibody (OX-6) [Alexa Fluor® 488]

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