

Seeing Beyond Limits

LIFECODES[®] Non-HLA Antibody Kit

SEE BEYOND THE LIMITS OF YOUR EXISTING WORKFLOW AND EXPAND YOUR TEST CAPABILITIES WITH IMMUCOR'S NON-HLA ANTIBODY KIT.

Multiple studies^{1,2} have demonstrated the impact of Non-HLA antibodies in transplant rejection. Immucor believes in making new tools available, like our LIFECODES[®] Non-HLA Antibody Kit, as it is critical to advancing the understanding and role of non-HLA in transplant rejection. We invite you to See Beyond the Limits of your current laboratory testing and explore new horizons.



LIFECODES® Non-HLA Antibody Kit

Be a pioneer in next generation antibody testing

- Low antigen background allows for easy assignment of positive and negative results
- Same workflow as other assays in the Immucor antibody product portfolio to maximize productivity
- Vacuum manifold wash technique reduces total hands-on time, operator variation, and contamination risk

Product Code	Description	Size
265500R	LIFECODES Non-HLA Antibody Kit*	24 assays per kit

Antigen	Gene Name	Exclusive to Immucor Luminex® Assay
ACTIN	Actin	✓
AGRN	Agrin	
APOL2	Apolipoprotein L2	✓
ARHGDIB	ARHGDIB	
ATP5B	ATP Synthase F1 Subunit Beta	✓
CCP	Cyclic Citrullinated Peptide	✓
CD40	CD40 molecule	✓
CGB5	Chorionic Gonadotropin Subunit Beta 5	✓
COLLAGEN I	Collagen I	
COLLAGEN II	Collagen II	
COLLAGEN III	Collagen III	
COLLAGEN IV	Collagen IV	
COLLAGEN V	Collagen V	
COLLAGEN VI	Collagen VI	✓
CSF2	Colony stimulating factor 2	✓
CXCL11	C-X-C Motif Chemokine Ligand 11	
CXCL9	C-X-C Motif Chemokine Ligand 9	
DEXI	Dexamethasone-induced transcript	✓
EMCN	Endomucin	✓
ENO1	Alpha-enolase	
FAS	Fas Cell Surface Death Receptor	✓
FIBRONECTIN1	Fibronectin 1	
FLRT2	Fibronectin Leucine Rich Transmembrane Protein 2	
GAPDH	Glyceraldehyde-3-phosphate Dehydrogenase	
GDNF	Glial Cell Derived Neurotrophic Factor	
GSTT1	Glutathione S-Transferase Theta-1	
HARS	Jo-1	✓
HSPB1	Heat Shock Protein Beta-1	✓
Human Transferrin	Transferrin	✓
ICAM1	Intracellular Adhesion Molecule 1	✓
IFNG	Interferon Gamma	
IL21	Interleukin 21	✓
IL8	Interleukin 8, CXCL8	✓
KRT18	Cytokeratin 18	✓
KRT8	Cytokeratin 8	✓
LGALS3	Galectin 3	✓
LGALS8	Galectin 8	✓
LMNA	Lamin-A/C	
LPHN1	Latrophilin 1	✓
MYOSIN	Myosin	
NCL	Nucleolin	
P2RY11	Purinergic Receptor P2Y11	✓
PECR	Peroxisomal Trans-2-enoyl-CoA Reductase	
PLA2R1	Phospholipase A2 Receptor 1	
PRKCH	Protein kinase C, Eta	
PRKCZ	Protein kinase C, Zeta	
PTPRO	Receptor-type Tyrosine-protein Phosphatase U	✓
ROR1	Receptor Tyrosine Kinase- Like Orphan Receptor 1	✓
SHC3	SHC Adaptor Protein 3	✓
SNRBP2	Small Nuclear Ribonucleoprotein Polypeptide B	✓
SNRPN	Small Nuclear Ribonucleoprotein Polypeptide N	✓
SSB	Sjogren Syndrome Antigen B	✓
STAT6	Signal Transducer And Activator Of Transcription 6	✓
Thyroglobulin	Thyroglobulin	✓
TUBA1B	Tubulin Alpha 1b	
TUBB	Tubulin Beta	✓
TUBULIN	Tubulin	✓
VCL	Vinculin	✓
VEGFA	Vascular Endothelial Growth Factor A	✓
VIM	Vimentin	

*For Research Use only. Not for use in diagnostic procedures

Collaborative Studies

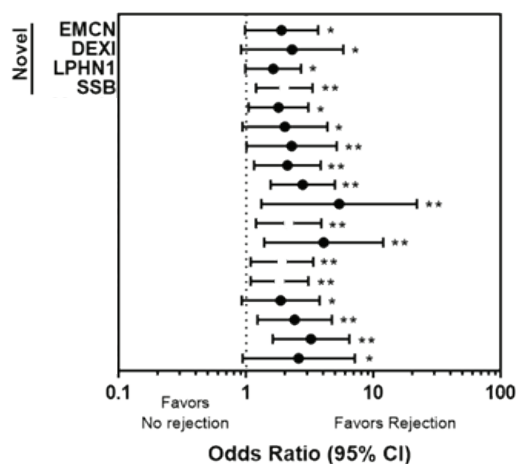
- In a published retrospective, case-control study³ of 64 orthotopic heart transplant recipients transplanted between 1994 and 2014, four antigens were found to be significantly different between AMR (antibody-mediated rejection) patients and non-AMR and increased reactivity to these antigens was associated with graft failure:
 - **APOL2: Apolipoprotein L2**
 - **LMNA: Lamin A/C**
 - **TUBB: Tubulin Beta**
 - **VIM: Vimentin**
- The authors of this study³ state the results suggest that antibodies to non-HLA are associated with DSA-positive AMR, although their specific role in mediating allograft injury is not yet understood.
- Non-HLA reactivity was enhanced in cases of AMR combined with ACR (acute cellular rejection).

Non-HLA antigen	PRA>10% DSA+ AMR n=18	No AMR n=21	Controls n=94	p-value (PRA>10% DSA+ AMR vs controls)	p-value (PRA>10% DSA+ AMR vs no AMR)
APOL2	6 (33.3)	0 (0)	4 (4.3)	0.0011	0.0057
LMNA	4 (22.2)	0 (0)	6 (6.4)	0.0534	0.0372
TUBB	6 (33.3)	1 (4.8)	3 (3.2)	0.0005	0.0350
VIM	4 (22.2)	0 (0)	3 (3.2)	0.0124	0.0372

Values presented as n (%)

- A published study⁴, identified 18 Non-HLA antigens are found to be associated with cardiac allograft rejection

- Four of these are newly described for cardiac:
 - **DEXI: Dexamethasone-induced transcript**
 - **EMCN: Endomucin**
 - **LPHN1: Latrophilin 1**
 - **SSB: Sjogren Syndrome Antigen B**



Seeing Beyond Limits



To learn more or to set up a demo with one of our Transplant Business Managers, call **855.IMMUCOR (855.466.8267)** or visit **www.immucor.com**.

International Contact: **imarketing@immucor.com**



www.immucor.com

¹Reinsmoen, N. (2019). "Compelling scientific and clinical evidence that non-HLA specific antibodies impact graft outcome independently and in concert with donor HLA specific antibodies." Human Immunology 80: 555-560

²Salvadori, M. and A. Tsalouchos (2018). "Relevance of Non-HLA Antibodies in Transplantation." Archives of Nephrology 1(1): 55-69

³See, S. B., et al. (2020). "Profiling non-HLA antibody responses in antibody-mediated rejection following heart transplantation." Am J Transplant 20(9): 2571-2580.

⁴Butler, C. L., et al. (2020). "Discovery of non-HLA antibodies associated with cardiac allograft rejection and development and validation of a non-HLA antigen multiplex panel: From bench to bedside." Am J Transplant 20(10): 2768-2780.