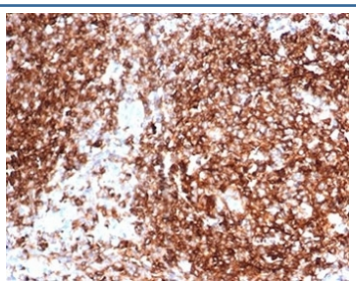
Pan-HLA Class II Antibody HLA-Pan/6663 / HLA-DP/DQ/DR Antibody [clone HLA-Pan/6663] (V8840)

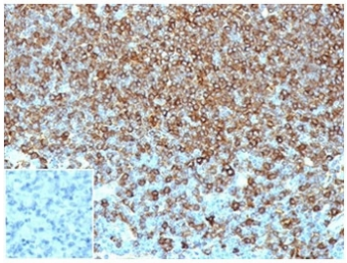
Catalog No.	Formulation	Size
V8840-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V8840-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V8840SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	HLA-Pan/6663
Purity	Protein A/G affinity
UniProt	P04440 (HLA-DP); P01908; P01909; P01920 (HLA-DQ); P01903 (HLA-DR)
Localization	Cell Surface
Applications	Flow cytometry: 1-2ug/million cells Immunohistochemistry (FFPE): 1-2ug/ml
Limitations	This Pan-HLA antibody is available for research use only.



IHC staining of FFPE human tonsil tissue with Pan-HLA antibody (clone HLA-Pan/6663). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



IHC staining of FFPE human lymph node tissue with Pan-HLA antibody (clone HLA-Pan/6663). Negative control inset: PBS instead of primary antibody to control for secondary binding. HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.

Description

Pan-HLA Class II Antibody HLA-Pan/6663 / HLA-DP/DQ/DR Antibody recognizes the classical human MHC class II molecules HLA-DP, HLA-DQ and HLA-DR. Collectively, these cell-surface proteins enable antigen-presenting cells to display processed peptides to CD4-positive T lymphocytes. This interaction provides an important checkpoint in adaptive immune recognition and contributes to the initiation, amplification and regulation of antigen-specific immune responses.

HLA-DP, HLA-DQ and HLA-DR each consist of an alpha and beta chain assembled into a non-covalent heterodimer. The extracellular portions of the two chains create a peptide-binding groove that accommodates antigenic peptides generated primarily through endosomal processing. Once peptide loading has produced a stable complex, the molecule is transported to the cell surface, where it can interact with T cell receptors and the CD4 co-receptor.

MHC class II molecules are strongly associated with antigen-presenting populations such as B lymphocytes, dendritic cells and macrophages. Their expression is regulated by cellular differentiation and immune signaling and may increase in response to inflammatory cytokines. These properties make HLA class II molecules useful for studying changes in antigen-presenting capacity and the activation state of immune and other responsive cell populations.

A reagent with broad HLA-DP/DQ/DR recognition allows researchers to assess MHC class II expression without limiting detection to one of the three classical HLA class II groups. This can complement antibodies directed against individual HLA loci and facilitate comparisons between total class II expression and locus-specific patterns. HLA class II expression is relevant to research involving immune-cell phenotyping, inflammation, autoimmunity, transplantation, infection and cancer immunology.

Clone HLA-Pan/6663 is a mouse monoclonal antibody characterized for broad recognition of human HLA-DP, HLA-DQ and HLA-DR. NSJ Bioreagents provides this Pan-HLA Class II Antibody for research into antigen presentation, immune-cell phenotyping and adaptive immune responses. An HLA-DP/DQ/DR Antibody can support investigation of MHC class II-positive populations and their interactions with CD4-positive T lymphocytes.

For additional information on HLA class II biology and complementary antibody validation, visit our HLA-DP/DQ/DR Antibody CR3/43 / MHC Class II Antibody page.

Application Notes

Optimal dilution of the Pan-HLA antibody should be determined by the researcher.

Immunogen

Priess human B cell line was used as the immunogen for the Pan-HLA antibody.

Storage

Aliquot the Pan-HLA antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

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