abcam

ab7856

Anti-HLA DR + DP + DQ antibody [CR3/43]

Anti-HLA DR + DP + DQ antibody [CR3/43] (ab7856) is a mouse monoclonal antibody detecting HLA DR + DP + DQ in **Western Blot, Flow Cytometry, IHC-P**. Suitable for **Human**.

- Recombinant format for unrivalled batch-batch consistency
- Over 20 publications
- Trusted since 2002

Recombinant

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing HLA-DPB1 protein. The exact immunogen used to generate this antibody is proprietary information. Database link P04440
Clone number	CR3/43
Purification technique	Affinity purification Protein A
Specificity	The gene of the human histocompatibility complex class II consists of at least four subregions: HLA DP, DQ, and DR, containing a minimum of one alpha and one beta chain. This antibody reacts with the beta-chain of all products of the gene subregions DP, DQ, and DR.
Light chain type	kappa
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/50 - 1/500
Notes	Perform heat-mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1/1000
Notes	-

Target data

See full target information HLA-DRA

Function An alpha chain of antigen-presenting major histocompatibility complex class II (MHCII) molecule. In complex with the beta chain HLA-DRB, displays antigenic peptides on professional antigen presenting cells (APCs) for recognition by alpha-beta T cell receptor (TCR) on HLA-DR-restricted CD4-positive T cells. This guides antigen-specific T-helper effector functions, both antibody-mediated immune response and macrophage activation, to ultimately eliminate the infectious agents and transformed cells (PubMed:15265931, PubMed:15322540, PubMed:17334368, PubMed:22327072, PubMed:24190431, PubMed:27591323, PubMed:29884618,

PubMed:31495665, PubMed:8145819, PubMed:9075930). Typically presents extracellular peptide antigens of 10 to 30 amino acids that arise from proteolysis of endocytosed antigens in lysosomes (PubMed:8145819). In the tumor microenvironment, presents antigenic peptides that are primarily generated in tumor-resident APCs likely via phagocytosis of apoptotic tumor cells or macropinocytosis of secreted tumor proteins (PubMed:31495665). Presents peptides derived from intracellular proteins that are trapped in autolysosomes after macroautophagy, a mechanism especially relevant for T cell selection in the thymus and central immune tolerance (PubMed:17182262, PubMed:23783831). The selection of the immunodominant epitopes follows two processing modes: 'bind first, cut/trim later' for pathogen-derived antigenic peptides and 'cut first, bind later' for autoantigens/self-peptides (PubMed:25413013). The anchor residue at position 1 of the peptide N-terminus, usually a large hydrophobic residue, is essential for high affinity interaction with MHCII molecules (PubMed:8145819).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

Product Specifications
Anti-HLA DR + DP + DQ antibody [CR3/43] (ab7856) is a mouse monoclonal antibody and is validated for use in IHC-P, WB in human samples.
Anti-HLA DR + DP + DQ antibody [CR3/43] (ab7856) specifically detects HLA DR + DP + DQ (UniProt ID: P04440; Molecular weight: 26kDa) and is sold in 500µL selling sizes.

Quality and Validation
Abcam's high quality validation processes ensure Anti-HLA DR + DP + DQ antibody [CR3/43] (ab7856) has high sensitivity and specificity.
Anti-HLA DR + DP + DQ antibody [CR3/43] (ab7856) has been cited over 24 times in peer reviewed journals and is trusted by the scientific community.
Anti-HLA DR + DP + DQ antibody [CR3/43] (ab7856) has 4 independent reviews from customers.

The production method has been switched from hybridoma to recombinant on 06th June 2025.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

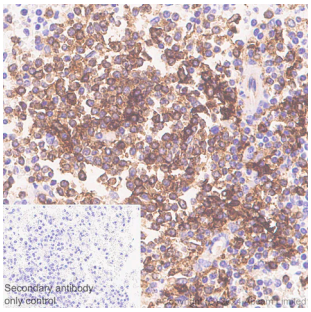
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

8 product images



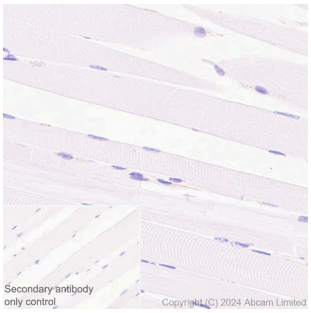
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HLA DR + DP + DQ antibody [CR3/43] (ab7856)

HLA DR + DP + DQ Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human spleen using mouse Anti-HLA DR + DP + DQ antibody

Immunohistochemical analysis of paraffin-embedded Human spleen tissue using ab7856 at a 1/18000 dilution followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on human spleen.
The section was incubated with ab7856 for 30 mins at room temperature, followed by anti-mouse IgG1 antibody (ab125913) for 8 mins during the LeicaDS9800 kit staining procedure.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument
Hematoxylin was used as a counter stain.

Heat mediated antigen retrieval was performed with Citrate buffer (pH 6.0, Epitope Retrieval Solution 1) for 20 mins.



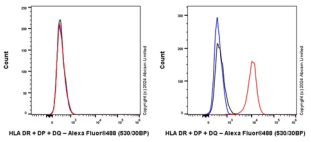
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HLA DR + DP + DQ antibody [CR3/43] (ab7856)

HLA DR + DP + DQ Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human skeletal muscle using mouse Anti-HLA DR + DP + DQ antibody

Immunohistochemical analysis of paraffin-embedded Human skeletal muscle tissue using ab7856 at a 1/18000 dilution followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Negative control: no staining on human skeletal muscle.
The section was incubated with ab7856 for 30 mins at room temperature, followed by anti-mouse IgG1 antibody (ab125913) for 8 mins during the LeicaDS9800 kit staining procedure.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument
Hematoxylin was used as a counter stain.

Heat mediated antigen retrieval was performed with Citrate buffer (pH 6.0, Epitope Retrieval Solution 1) for 20 mins.

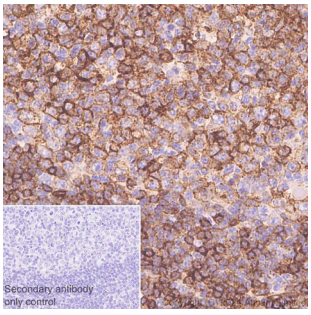


Flow Cytometry - Anti-HLA DR + DP + DQ antibody [CR3/43] (ab7856)

HLA DR + DP + DQ Flow Cytometry staining using mouse Anti-HLA DR + DP + DQ antibody

Flow cytometric analysis of KARPAS-299 (human T cell lymphoma cell) (Right) / HepG2 (human hepatocellular carcinoma epithelial cell) (Left) cells labelling HLA DR + DP + DQ with ab7856 at 1/1000 dilution (0.1&micor;g)/Red followed by a secondary antibody Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) used at a 1/5000 dilution compared with isotype control Rabbit monoclonal IgG (ab172730) / Black and unlabelled control Cell without incubation with primary antibody and secondary antibody / Blue.

Gated on viable cells.
Negative control: HepG2.



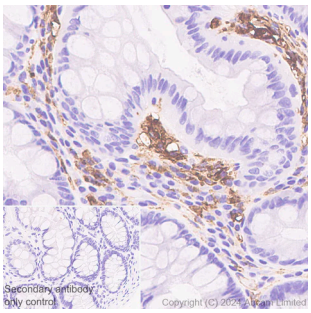
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HLA DR + DP + DQ antibody [CR3/43] (ab7856)

HLA DR + DP + DQ Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human tonsil using mouse Anti-HLA DR + DP + DQ antibody

Immunohistochemical analysis of paraffin-embedded Human tonsil tissue using ab7856 at a 1/18000 dilution followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on human tonsil.
The section was incubated with ab7856 for 30 mins at room temperature, followed by anti-mouse IgG1 antibody (ab125913) for 8 mins during the LeicaDS9800 kit staining procedure.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument
Hematoxylin was used as a counter stain.

Heat mediated antigen retrieval was performed with Citrate buffer (pH 6.0, Epitope Retrieval Solution 1) for 20 mins.



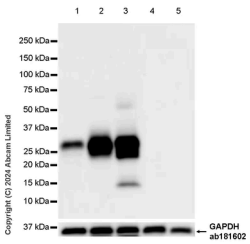
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-HLA DR + DP + DQ antibody [CR3/43] (ab7856)

HLA DR + DP + DQ Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human colon using mouse Anti-HLA DR + DP + DQ antibody

Immunohistochemical analysis of paraffin-embedded Human colon tissue using ab7856 at a 1/18000 dilution followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).

Positive staining on human colon.
The section was incubated with ab7856 for 30 mins at room temperature, followed by anti-mouse IgG1 antibody (ab125913) for 8 mins during the LeicaDS9800 kit staining procedure.
The immunostaining was performed on a Leica Biosystems BOND® RX instrument
Hematoxylin was used as a counter stain.

Heat mediated antigen retrieval was performed with Citrate buffer (pH 6.0, Epitope Retrieval Solution 1) for 20 mins.



Western blot - Anti-HLA DR + DP + DQ antibody [CR3/43] (ab7856)

HLA DR + DP + DQ Western blot staining using mouse Anti-HLA DR + DP + DQ antibody

Blocking and dilution buffer and concentration: 5% NFDM/TBST

Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) was used as a loading control at 1/200000 dilution.

Low expression: HeLa.
Negative control: HepG2.
All lanes:
Western blot - Anti-HLA DR + DP + DQ antibody [CR3/43] (ab7856) at 1/1000 dilution

Lane 1:
U-87 MG (human glioblastoma-astrocytoma epithelial cell) whole cell lysate at 20 µg

Lane 2:
KARPAS-299 (human T cell lymphoma cell) whole cell lysate at 20 µg

Lane 3:
HDLM-2 (human Hodgkin lymphoma cell) whole cell lysate at 20 µg

Lane 4:
HeLa (human cervical adenocarcinoma epithelial cell) whole cell lysate at 20 µg

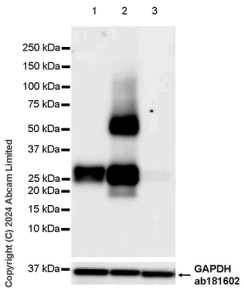
Lane 5:
HepG2 (human hepatocellular carcinoma epithelial cell) whole cell lysate at 20 µg

Secondary

All lanes:
Peroxidase-Conjugated Goat anti-Mouse IgG (H+L) at 1/10000 dilution

Observed band size: 30 kDa

Exposure time: 10s



Western blot - Anti-HLA DR + DP + DQ antibody [CR3/43] (ab7856)

HLA DR + DP + DQ Western blot staining using mouse Anti-HLA DR + DP + DQ antibody

Blocking and dilution buffer and concentration: 5% NFDM/TBST

Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) was used as a loading control at 1/200000 dilution.

Low expression:skeletal muscle.
The identity of MW band at approximately 50 kDa (in lane 2) is unknown.
All lanes:
Western blot - Anti-HLA DR + DP + DQ antibody [CR3/43] (ab7856) at 1/1000 dilution

Lane 1:
Human tonsil tissue lysate at 20 µg

Lane 2:
Human lung tissue lysate at 20 µg

Lane 3:
Human skeletal muscle tissue lysate at 20 µg

Secondary

All lanes:
Peroxidase-Conjugated Goat anti-Mouse IgG (H+L) at 1/10000 dilution

Observed band size: 30 kDa

Exposure time: 37s

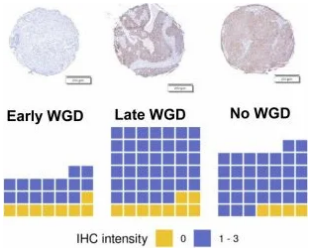


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Immunohistochemistry - Anti-HLA DR + DP + DQ antibody [CR3/43] (ab7856)

HLA DR + DP + DQ Immunohistochemistry staining using mouse Anti-HLA DR + DP + DQ antibody

Immunohistochemistry using Anti-HLA DR + DP + DQ antibody [CR3/43], ab7856. Publication image from Burdett, N. et al., 2024, Nat Commun, 39025846. Legend direct from paper.

Differences in gene expression and clinical outcomes by timing of WGD.a Hierarchical clustering of Hallmark pathway enrichment scores in the discovery ICGC cohort. n = 79. Heatmap is annotated by timing of whole genome duplication (WGD), clinical response to first line therapy and molecular subtype (C1,C2,C4,C5). b Two-sided Kaplan–Meier analysis of overall survival (top) and progression free survival (bottom) by presence and timing of WGD in 352 patients (ICGC and TCGA cohorts combined). c Top: Representative image of core stained with anti-HLA DR + DP + DQ for each WGD category; scale bar is 200 µm. Bottom: Waffle plots depicting immunohistochemistry (IHC) results, coloured by zero (yellow) versus any (lilac) staining with anti-HLA DR + DP + DQ, separated by WGD status. Early WGD n = 23 cores; Late WGD n = 49 cores; No WGD n = 37 cores. Source data are provided as a Source Data file.

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