Revision 8

Store at -20C

#68258

MHC Class II (LGII-612.14) Mouse mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, W-S, IP, IHC-Bond, IHC-P, FC-L	H	Endogenous	25-35, 50-65	Mouse IgG1	#P01911, #P04440	3123, 3115

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Simple Western™	1:10 - 1:50
Immunoprecipitation	1:50
IHC Leica Bond	1:800 - 1:3200
Immunohistochemistry (Paraffin)	1:400 - 1:1600
Flow Cytometry (Live)	1:100 - 1:400

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. *Do not aliquot the antibody.*

For a carrier free (BSA and azide free) version of this product see product #43816.

Specificity/Sensitivity

MHC Class II (LGII-612.14) Mouse mAb exhibits strong reactivity with HLA-DRB and weak reactivity with HLA-DPB in cell lines transfected with constructs expressing Myc/DDK-tagged HLA-DRB and HLA-DPB, respectively. Reactivity is not observed with HLA-DMB, HLA-DOB, and HLA-DQB in cell lines transfected with constructs expressing Myc/DDK-tagged HLA-DMB, HLA-DOB, and HLA-DQB.

Source / Purification

Monoclonal antibody is produced by immunizing animals with cultured human B lymphoid cells treated with IFN-gamma.

Background

Major histocompatibility complex class II (MHC class II) molecules are heterodimeric, transmembrane glycoproteins expressed on the surface of antigen-presenting cells, such as macrophages, dendritic cells, and B cells. Expression can also be induced on other cell types through interferon-γ signaling (1). Prior to being displayed on the cell membrane, MHC class II molecules are loaded with exogenous peptide antigens approximately 15-24 amino acids in length that were derived from endocytosed extracellular proteins digested in the lysosome (2). Antigen-presentation through MHC class II is required for T cell activation during the immune response to extracellular pathogens (2). In humans, the MHC class II protein complex is encoded by the human leukocyte antigen gene complex (HLA). HLAs corresponding to MHC class II are HLA-DP, HLA-DM, HLA-DOA, HLA-DOB, HLA-DQ, and HLA-DR (3).

In the literature, this clone is reported to react with HLA-DR, HLA-DP, and HLA-DQ (4).

Background References

1. Ting, J.P. and Trowsdale, J. (2002) *Cell* 109 Suppl, S21-33.
2. Cresswell, P. (1994) *Annu Rev Immunol* 12, 259-93.
3. Karp, D.R. et al. (1990) *J Exp Med* 171, 615-28.
4. Temponi, M. et al. (1993) *J Immunol Methods* 161, 239-56.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **W-S:** Simple Western™ **IP:** Immunoprecipitation **IHC-Bond:** IHC Leica Bond **IHC-P:** Immunohistochemistry (Paraffin) **FC-L:** Flow Cytometry (Live)

Cross-Reactivity Key

H: Human

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