Revision 1

Store at -20C

#78144

LILRB1/CD85j (D4L8L) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H	Endogenous	110	Rabbit IgG	#Q8NHL6	10859

Product Usage Information

Application	Dilution
Western Blotting	1:1000

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.

Specificity/Sensitivity

LILRB1/CD85j (D4L8L) Rabbit mAb recognizes endogenous levels of total LILRB1/CD85J protein. This antibody does not cross-react with LILRB2 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Arg370 of human LILRB1/CD85j protein.

Background

The leukocyte Ig-like receptor subfamily B (LILRB) are type-I transmembrane glycoproteins containing ligand binding extracellular IgG-like domains and immunoreceptor tyrosine-based inhibition motifs (ITIMS) within the cytoplasmic domain, which recruit SHP protein tyrosine phosphatases, leading to transduction of signals that inhibit immune cell activation. Encoded within a region of chromosome 19 known as the leukocyte receptor complex, the LILRB subfamily of inhibitory receptors consists of LILRB1 to LILRB5, also referred to as CD85J, CD85D, CD85A, CD85K, and CD85C, respectively (1). There is mounting evidence that LILRBs function, in part, as a novel class of immune checkpoint receptors and support tumor growth through the transmission of inhibitory signals upon engagement of ligands expressed on tumor cells (2).
LILRB1 (CD85j/ILT2/LIR1) is expressed across multiple hematopoietic cell lineages, such as B-cells, NK cells, monocytes, and T-cells (3,4). Like other members of the LILRB subfamily, LILRB1 contains multiple extracellular IgG-like domains and intracellular ITIM motifs (5). Research studies have demonstrated that LILRB1 interacts with multiple HLA class I ligands, such as HLA-G (6). Cross-linking of LILRB1 upon ligand engagement has been shown to activate immunosuppressive signaling cascades, which in B-cells, suppresses their activation and ability to produce antibodies (7). In NK and T cell lineages, research studies have shown that LILRB1 transduces signaling to inhibit cytolytic activity (3).

Background References

1. Allan, D.S. et al. (2000) *Immunobiology* 202, 34-41.
2. Roberti, M.P. et al. (2015) *Eur J Immunol* 45, 1560-9.
3. Colonna, M. et al. (1997) *J Exp Med* 186, 1809-18.
4. Samaridis, J. and Colonna, M. (1997) *Eur J Immunol* 27, 660-5.
5. Borges, L. et al. (1997) *J Immunol* 159, 5192-6.
6. Shiroishi, M. et al. (2003) *Proc Natl Acad Sci U S A* 100, 8856-61.
7. Naji, A. et al. (2014) *J Immunol* 192, 1536-46.

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 BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human

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