abcam

**ab185796**

# Anti-LILRB1 antibody [HP-F1] - Low endotoxin, Azide free

## Key facts

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|---|---|
| **Isotype** | IgG1 |
| **Host species** | Mouse |
| **Storage buffer** | pH: 7.2 Constituents: PBS |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | Native Full Length Protein corresponding to Human LILRB1. Database link Q8NHL6 |
| **Carrier free** | Yes |
| **Clone number** | HP-F1 |
| **Purification technique** | Affinity purification Protein G |
| **Light chain type** | kappa |

## Reactivity data

## Flow Cyt

### Expected

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|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | In a final volume of 100 uL. ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody. |

# FuncS

## Expected

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|---|---|
| **Species** | Human |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

## Target data

See full target information LILRB1

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|---|---|
| **Function** | Receptor for class I MHC antigens. Recognizes a broad spectrum of HLA-A, HLA-B, HLA-C, HLA-G and HLA-F alleles (PubMed:16455647, PubMed:28636952). Receptor for H301/UL18, a human cytomegalovirus class I MHC homolog. Ligand binding results in inhibitory signals and down-regulation of the immune response. Engagement of LILRB1 present on natural killer cells or T-cells by class I MHC molecules protects the target cells from lysis. Interaction with HLA-B or HLA-E leads to inhibition of FCER1A signaling and serotonin release. Inhibits FCGR1A-mediated phosphorylation of cellular proteins and mobilization of intracellular calcium ions (PubMed:11907092, PubMed:9285411, PubMed:9842885). Recognizes HLA-G in complex with B2M/beta-2 microglobulin and a nonamer self-peptide (PubMed:16455647). Upon interaction with peptide-bound HLA-G-B2M complex, triggers secretion of growth-promoting factors by decidual NK cells (PubMed:19304799, PubMed:29262349). Reprograms B cells toward an immune suppressive phenotype (PubMed:24453251). |

## Storage

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|---|---|
| **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

Endotoxin: Less than 0.001 ng/ug antibody, as determined by the LAL assay.
The monoclonal antibody HP-F1 has been shown to reduce the amount of CD16-dependent cytolytic activity of functional NK cells.

## Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

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|---|---|
| **Activity summary** | LILRB1 also known as leukocyte immunoglobulin-like receptor subfamily B member 1 or CD85j is a protein expressed mainly on myeloid cells including monocytes and dendritic cells as well as some subsets of lymphocytes. This transmembrane protein is approximately 110-120 kDa in mass and is recognized for its role in immune regulation. LILRB1 interacts with MHC class I molecules on target cells mediating inhibitory signals that prevent immune overactivation. These interactions allow LILRB1 to help maintain self-tolerance and regulate adaptive immune responses. |
| **Biological function summary** | LILRB1 functions as an inhibitory receptor that dampens immune system activation by recruiting SHP-1 and SHP-2 phosphatases. As part of a complex with other immune checkpoint molecules LILRB1 modulates the balance between activating and inhibitory signals in immune cells. Its inhibitory signaling prevents excessive inflammation by reducing cytokine production and limiting T cell proliferation. |
| **Pathways** | This protein plays a role in immune signaling pathways specifically through interactions with proteins involved in the regulation of immune responses such as KIRs (Killer-cell Immunoglobulin-like Receptors). It participates in pathways that control the inhibitory signals controlling immune activity like the NK cell cytotoxicity pathway and the Fc gamma R-mediated phagocytosis pathway. Through these mechanisms LILRB1 maintains immune equilibrium and preserves tissue integrity during immune responses. |
| **Associated diseases and disorders** | The dysregulation of LILRB1 activity links to autoimmune conditions and infectious disease outcomes. Aberrant expression or function can impact diseases such as rheumatoid arthritis and HIV influencing the progression and severity of these conditions. In rheumatoid arthritis altered LILRB1 signaling may exacerbate inflammation while in the context of HIV it could affect immune cell exhaustion. Furthermore LILRB1 interactions with proteins like ILT2 highlight its potential involvement in modulating immune responses during these diseases. |

## 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.

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