

# Bulk Anti-Human CD45 (BC8) Antibody

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## Product Benefits:

ichorbio's bulk anti-human CD45 antibody (BC8) is manufactured in a cGMP compliant, ISO Quality Standard 9001:2015 facility. ichorbio's low endotoxin antibodies have half the endotoxin of comparable antibodies from [Bio X Cell](#) at less than 1.0 EU/mg. If ichorbio's low endotoxin antibodies are not low enough we also offer ultra low endotoxin antibodies which have even less endotoxin (0.5EU/mg) at an even higher purity (98% versus 95%). ichorbio: the best antibodies for *in vivo* research.

## Target:

CD45

## Clone:

BC8

## Isotype:

Mouse IgG1

## Other Names:

PTPRC, Receptor-type tyrosine-protein phosphatase C, Leukocyte common antigen, LCA, T200, Ly5

## Uniprot:

[P06800](#)

## Host:

Mouse

## Species Reactivity:

Human

## Specificity:

Human CD45

## Purification Method:

This monoclonal antibody was purified using multi-step affinity chromatography methods such as Protein A or G depending on the species and isotype.

## Antigen Distribution:

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CD45 is expressed on all hematopoietic cells other than mature erythrocytes and platelets.

**Background:**

CD45 is a 180-240kD glycoprotein member of the protein tyrosine phosphatase (PTP) family known for its involvement in regulating a variety of cellular processes including cell growth, differentiation, mitotic cycle, and oncogenic transformation. CD45 and its isoforms are vital regulators of T- and B-cell antigen receptor signaling. CD45 functions through its extracellular domain or through its cytoplasmic domain, and serves as a negative regulator of cytokine receptor signaling via JAK kinase suppression. The large extracellular domain is highly glycosylated, and its multiple isoforms allow extensive variation in the structure of its side chains. CD45 isoforms show cell-type and differentiation-stage specific expression that can be used as markers that identify and distinguish between different types of immune cells. CD45R is an isoform of CD45 with a molecular weight of 220 kD. CD45R contains all three possible exons (A, B, and C); making it the longest protein generated from alternative splicing with a migration at 200 kD when isolated from T cells. Furthermore, B cells express CD45R with heavier glycosylation, bringing the molecular weight to 220 kD, hence the name B220. Notably, B220 expression is not only restricted to B cells and may also be expressed on activated T cells, on a subset of dendritic cells, and on other antigen-presenting cells. Additionally, activated and memory T lymphocytes express CD45RO which facilitates T cell activation. CD45RO lacks all three possible exons (A, B, and C), making it the shortest CD45 isoform.

**Concentration:**

1.0 mg/ml

**Formulation:**

This monoclonal antibody is aseptically packaged and formulated in 0.01 M phosphate buffered saline (PBS) pH 7.2 - 7.4, 150 mM NaCl with no carrier protein, potassium or preservatives added. BSA and azide free

**Purity:**

>95% by SDS-PAGE and HPLC

>98% by SDS-PAGE and HPLC

**Endotoxin:**

? 1.0 EU/mg as determined by the LAL method

? 0.75 EU/mg as determined by the LAL method

**Aggregation:**

Aggregation level ? 5%

Aggregation level ? 1%

**IMPACT Pathogen Test:**

We use the IMPACT test generated by IDEXX Laboratories to guarantee our Ultra Low Endotoxin antibodies are pathogen free. Our mouse antibodies are tested for: Mycoplasma spp. Mycoplasma pulmonis Sendai virus Mouse

hepatitis virus Pneumonia virus of mice Minute virus of mice Mouse parvovirus (MPV1-5) Theiler's murine encephalomyelitis virus Murine norovirus Reovirus 3 Mouse rotavirus Ectromelia virus Lymphocytic choriomeningitis virus Polyoma virus Lactate dehydrogenase-elevating virus Mouse adenovirus (MAD1, MAD2) Mouse cytomegalovirus K virus Mouse thymic virus Hantaan virus Corynebacterium bovis Corynebacterium spp. (HAC2)

**Storage:**

This antibody is stable for at least 4 weeks when stored at 2-8°C. For long term storage, aliquot in working volumes without diluting and store at – 20°C or -80°C. Avoid repeated freeze thaw cycles.

**Applications:**

Functional Assays

**Application Notes:**

Each investigator should determine their own optimal working dilution for specific applications.

**Use:**

Products are for research use only.