Phospho-CD45 (Ser1007)[ser1009] Blocking Peptide – The purity is >90%,tested by HPLC and MS. Purity

PRODUCT OVERVIEW

Product Name	CD45, Blocking Peptide
Full Product Name	Phospho-CD45 (Ser1007)[Ser1009] Blocking Peptide
Product Gene Name	CD45 blocking peptide
Product Synonym Gene Name	PTPRC
Product Synonym Names	B220; CD 45; CD45; CD45 antigen; CD45R; GP180; L-CA; LCA; Leukocyte common antigen; loc; Ly-5; LY5; Ly5, homolog of; Lyt-4; OTTHUMP00000033813; OTTHUMP00000033816; OTTHUMP00000033817; OTTHUMP00000038574; Protein tyrosine phosphatase receptor type c polypeptide; Protein tyrosine phosphatase, receptor type C; protein tyrosine phosphatase, receptor type, C; Protein tyrosine phosphatase, receptor type, c polypeptide; Ptprc; PTPRC_HUMAN; Receptor-type tyrosine-protein phosphatase C; T200; T200 glycoprotein; T200 leukocyte common antigen
Form/Format	Synthetic peptide was lyophilized with 100% acetonitrile and is supplied as a powder. Reconstitute with 0.1 ml DI water for a final concentration of 10 mg/ml.
Purity/Purification	The purity is >90%,tested by HPLC and MS.
Preparation and Storage	Maintain refrigerated at 2-8 degree C for up to 6 months. For long term storage store at -20 degree C.
Antibody/Peptide Pairs	CD45 (Ser1007)[Ser1009] peptide (MBS9615482) is used for blocking the activity of CD45 (Ser1007)[Ser1009] antibody (MBS9600899)
Molecular Weight	147,254 Da
Chromosome Location	Chromosome: 1; NC_000001.10 (198608098..198726605). Location: 1q31-q32
OMIM	126200
Supply Chain Verification	Manufactured in a lab with traceable raw materials manufactured on site. Coordinated product portfolio of antibodies, pairs, conjugates, recombinant proteins, and immunoassay materials available, please inquire.
Notes	For phospho antibody, we provide phospho peptide (0.5mg) and non-phospho peptide (0.5mg)
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for CD45 blocking peptide	Blocking/Control
Related Product Information for CD45 blocking peptide	Blocking peptides are peptides that bind specifically to the target antibody and block antibody binding. These peptide usually contains the epitope recognized by the antibody. Antibodies bound to the blocking peptide no longer bind to the epitope on the target protein. This mechanism is useful when non-specific binding is an issue, for example, in Western blotting (immunoblot) and immunohistochemistry (IHC). By comparing the staining from the blocked antibody versus the antibody alone, one can see which staining is specific; Specific binding will be absent from the western blot or immunostaining performed with the neutralized antibody.
Other Notes	Small volumes of CD45 blocking peptide vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for CD45 purchase	MBS9615482 is a blocking peptide targeting CD45. Also known as Phospho-CD45 (Ser1007)[Ser1009] Blocking Peptide.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for CD45. It may not necessarily be applicable to this product.

NCBI GI #	392307007
NCBI GeneID	5788
NCBI Accession #	NP_002829.3
UniProt Primary Accession #	P08575
UniProt Secondary Accession #	Q16614; Q9H0Y6; A0A0A0MT22; A8K7W6; X6R433
UniProt Related Accession #	P08575
GenBank Nucleotide #	NM_002838.4
NCBI Official Full Name	receptor-type tyrosine-protein phosphatase C isoform 1
NCBI Official Synonym Full Names	protein tyrosine phosphatase, receptor type, C
NCBI Official Symbol	PTPRC
NCBI Official Synonym Symbols	LCA; LY5; B220; CD45; L-CA; T200; CD45R; GP180
UniProt Protein Name	Receptor-type tyrosine-protein phosphatase C
UniProt Synonym Protein Names	Leukocyte common antigen; L-CA; T200
Protein Family	Protein tyrosine phosphatase receptor type C-associated protein
UniProt Gene Name	PTPRC
UniProt Synonym Gene Names	CD45; L-CA
UniProt Entry Name	PTPRC_HUMAN
NCBI Protein Information	receptor-type tyrosine-protein phosphatase C; CD45 antigen; T200 glycoprotein; T200 leukocyte common antigen; protein tyrosine phosphatase, receptor type, c polypeptide
NCBI Summary for CD45	The protein encoded by this gene is a member of the protein tyrosine phosphatase (PTP) family. PTPs are known to be signaling molecules that regulate a variety of cellular processes including cell growth, differentiation, mitosis, and oncogenic transformation. This PTP contains an extracellular domain, a single transmembrane segment and two tandem intracytoplasmic catalytic domains, and thus is classified as a receptor type PTP. This PTP has been shown to be an essential regulator of T- and B-cell antigen receptor signaling. It functions through either direct interaction with components of the antigen receptor complexes, or by activating various Src family kinases required for the antigen receptor signaling. This PTP also suppresses JAK kinases, and thus functions as a regulator of cytokine receptor signaling. Alternatively spliced transcripts variants of this gene, which encode distinct isoforms, have been reported. [provided by RefSeq, Jun 2012]

UniProt Comments for CD45	CD45: a receptor type protein tyrosine phosphatase protein. Contains an extracellular domain, a single transmembrane segment and two tandem intracytoplasmic catalytic domains. The first PTPAse domain has enzymatic activity, while the second one seems to affect the substrate specificity of the first one. Specifically expressed in hematopoietic cells. An essential regulator of T- and B-cell antigen receptor signaling. Functions through either direct interaction with components of the antigen receptor complexes, or by activating various Src family kinases required for the antigen receptor signaling. Suppresses JAK kinases, and thus functions as a regulator of cytokine receptor signaling. Four alternatively spliced isoforms have been described. Protein type: Membrane protein, integral; Motility/polarity/chemotaxis; Receptor protein phosphatase, tyrosine; EC 3.1.3.48 Chromosomal Location of Human Ortholog: 1q31-q32 Cellular Component: focal adhesion; membrane; integral to plasma membrane; plasma membrane; lipid raft; external side of plasma membrane Molecular Function: protein binding; transmembrane receptor protein tyrosine phosphatase activity; protein tyrosine phosphatase activity; protein kinase binding Biological Process: B cell proliferation; axon guidance; substrate-bound cell migration, cell release from substrate; regulation of cell cycle; protein amino acid dephosphorylation; positive regulation of antigen receptor-mediated signaling pathway; T cell receptor signaling pathway; bone marrow development; B cell receptor signaling pathway; stem cell development; cell surface receptor linked signal transduction; dephosphorylation; release of sequestered calcium ion into cytosol; positive regulation of protein kinase activity; negative regulation of T cell mediated cytotoxicity; positive regulation of B cell proliferation; negative regulation of protein kinase activity; positive regulation of T cell proliferation; hemopoietic progenitor cell differentiation; negative regulation of cytokine and chemokine mediated signaling pathway; immunoglobulin biosynthetic process; defense response to virus; T cell differentiation Disease: Hepatitis C Virus, Susceptibility To; Severe Combined Immunodeficiency, Autosomal Recessive, T Cell-negative, B Cell-positive, Nk Cell-positive
Research Articles on CD45	**1.** The E613R allele of CD45 does not function as a hyper- or hypomorphic allele but rather alters the substrate specificity of CD45 for Lyn.
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