

Anti-CD45 [HLe-1(2D1)]

Catalogue number: 151108

Sub-type: Primary antibody

Images:

Contributor

Inventor: Peter Beverley

Institute: Cancer Research UK, London Research Institute: Lincoln's Inn Fields

Images:

Tool details

***FOR RESEARCH USE ONLY**

Name: Anti-CD45 [HLe-1(2D1)]

Alternate name: Anti-PTPRC

Class: Monoclonal

Conjugate: Unconjugated

Description: Monoclonal antibody capable of analysing subpopulations of hematopoietic and lymphoid cells, and the degree of T cell differentiation. It can be used to identify the effect of CD45 in immune function.

Purpose:

Parental cell:

Organism:

Tissue:

Model:

Gender:

Isotype: IgG1

Reactivity: Human

Selectivity:

Host: Mouse

Immunogen: Human peripheral blood mononuclear cells.

Immunogen UNIPROT ID: P08575

Sequence:

Growth properties:

Production details:

Formulation:

Recommended controls:

Bacterial resistance:

Selectable markers:

Additional notes:

Target details

Target: Protein tyrosine phosphatase, receptor type, C (PTPRC, CD45)

Target alternate names:

Target background: Anti-PTPRC (Hle-1) monoclonal antibody binds transmembrane protein tyrosine phosphatase receptor type C (PTPRC), also known as CD45 antigen or leukocyte common antigen (LCA). Anti-PTPRC can be used in a panel of several monoclonal antibodies to characterise tumours. This antibody was created to investigate the similarities between normal thymocyte subpopulations and leukaemia's of thymic origin (Thy-ALL), and aid with leukaemia diagnosis. PTPRC is present on all leukocytes. CD45 helps regulate T cell receptor-associated kinases and Janus kinases which transmit signals from cytokine receptors. This regulates the threshold of T cell antigen receptor (TCR) signalling through dephosphorylation of protein tyrosine kinases (e.g. Lck and Fyn). It is only expressed on nucleated hemopoietic cells (~10% of cell surface). CD45 phosphatase activity is required for efficient lymphocyte antigen receptor signal transduction. CD45 is a positive and negative regulator of Src family members, and can act as a JAK phosphatase, negatively regulating cytokine receptor activation (related to differentiation, proliferation and anti-viral immunity of hemopoietic cells).

Molecular weight: 180-220 kDa

Ic50:

Applications

Application: FACS ; IHC ; IF

Application notes:

Handling

Format: Liquid

Concentration: 1 mg/ml

Passage number:

Growth medium:

Temperature:

Atmosphere:

Volume:

Storage medium:

Storage buffer: PBS with 0.02% azide

Storage conditions: Store at -20° C frozen. Avoid repeated freeze / thaw cycles

Shipping conditions: Shipping at 4° C

Related tools

Related tools:

References

References: Sharp et al. 2010. PLoS One. 5(10):e13130. PMID: 20976190. ; Inhibition of cellular protein secretion by norwalk virus nonstructural protein p22 requires a mimic of an endoplasmic reticulum export signal. ; Wojtowicz et al. 2007. Cell. 130(6):1134-45. PMID: 17889655. ; A vast repertoire of Dscam binding specificities arises from modular interactions of variable Ig domains. ; Durbin et al. 1988. Int J Cancer Suppl. 2:50-8. PMID: 2450848. ; Durbin et al. 1988. Int J Cancer Suppl. 2:59-66. PMID: 3162446. ; Production of monoclonal antibodies to placental alkaline phosphatase: preliminary characterisation includes identification of one antibody reactive with routinely fixed histological preparations. ; Monoclonal antibodies to placental alkaline phosphatase: preclinical evaluation in a human xenograft tumour model of F(ab')₂ and Fab fragments.

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