

SM2012P**Monoclonal Antibody to HLA Class I ABC Xenograft marker - Purified**

Alternate names:	HLA Class 2 ABC, Human Leukocyte antigen class I ABC, MHC class I ABC, Major Histocompatibility complex class I
Quantity:	0.2 mg
Concentration:	1.0 mg/ml
Background:	The major histocompatibility complex (MHC) is a cluster of genes that are important in the immune response to infections. In humans, this complex is referred to as the human leukocyte antigen (HLA) region. There are 3 major MHC class I proteins encoded by the HLA which are HLA A, HLA B and HLA C. These proteins are found on the surface of almost all nucleated somatic cells.
Host / Isotype:	Rat / IgG2b
Clone:	YTH862.2
Immunogen:	PHA activated Human peripheral blood lymphocytes. Spleen cells from immunised DA rats were fused with cells of the rat Y3 myeloma cell line.
Format:	State: Liquid purified IgG fraction from Tissue Culture Supernatant Purification: Affinity Chromatography on Protein G Buffer System: PBS Preservatives: 0.09% Sodium Azide
Applications:	Immunoprecipitation. Immunofluorescence. Functional Assays: Removal of Sodium Azide by dialysis is recommended prior to use. Immunohistochemistry on Frozen Sections. Flow Cytometry: Use 10 µl of 1/50-1/100 diluted antibody to label 10 ⁶ cells in 100 µl. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	This antibody recognizes a monomorphic determinant on the Human HLA Class I heavy chain. Epitope analysis has shown that this antibody binds in the alpha-1 domain. Antibody SM2012P detects the Human HLA class I ABC antigen without cross-reactivity to Mouse. Studies have shown that this antibody may be able to induce apoptosis in activated but not resting T cells (See <i>Genestier, L. et al.</i> for details). Negative Species: Mouse. Species: Human. Other species not tested.

Storage:

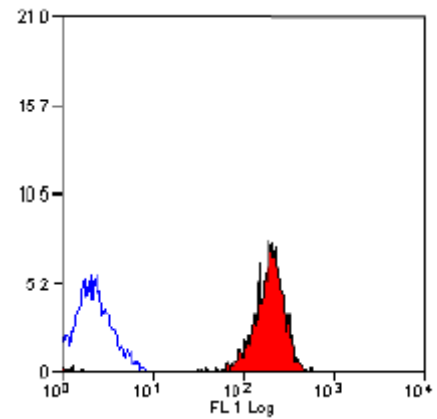
Store undiluted at 2-8°C for one month or (in aliquots) at -20°C for longer.
Avoid repeated freezing and thawing.
Shelf life: one year from despatch.

General Readings:

1. Genestier L, Paillot R, Bonnefoy-Berard N, Meffre G, Flacher M, Fèvre D, et al. Fas-independent apoptosis of activated T cells induced by antibodies to the HLA class I alpha1 domain. *Blood*. 1997 Nov 1;90(9):3629-39. PubMed PMID: 9345047.
2. Genestier L, Meffre G, Garrone P, Pin JJ, Liu YJ, Banchereau J, et al. Antibodies to HLA class I alpha1 domain trigger apoptosis of CD40-activated human B lymphocytes. *Blood*. 1997 Jul 15;90(2):726-35. PubMed PMID: 9226173.
3. Genestier L, Prigent AF, Paillot R, Quemeneur L, Durand I, Banchereau J, et al. Caspase-dependent ceramide production in Fas- and HLA class I-mediated peripheral T cell apoptosis. *J Biol Chem*. 1998 Feb 27;273(9):5060-6. PubMed PMID: 9478956.
4. Liu S, Tian Y, Chlenski A, Yang Q, Zage P, Salwen HR, et al. Cross-talk between Schwann cells and neuroblasts influences the biology of neuroblastoma xenografts. *Am J Pathol*. 2005 Mar;166(3):891-900. PubMed PMID: 15743800.
5. Schmidt J, Barthel K, Wrede A, Salajegheh M, Bähr M, Dalakas MC. Interrelation of inflammation and APP in sIBM: IL-1 beta induces accumulation of beta-amyloid in skeletal muscle. *Brain*. 2008 May;131(Pt 5):1228-40. doi: 10.1093/brain/awn053. Epub 2008 Apr 17. PubMed PMID: 18420712.
6. Muth IE, Barthel K, Bähr M, Dalakas MC, Schmidt J. Proinflammatory cell stress in sporadic inclusion body myositis muscle: overexpression of alphaB-crystallin is associated with amyloid precursor protein and accumulation of beta-amyloid. *J Neurol Neurosurg Psychiatry*. 2009 Dec;80(12):1344-9. doi: 10.1136/jnnp.2009.174276. Epub 2009 May 25. PubMed PMID: 19470495.
7. Schmidt J, Rakocevic G, Raju R, Dalakas MC. Upregulated inducible co-stimulator (ICOS) and ICOS-ligand in inclusion body myositis muscle: significance for CD8+ T cell cytotoxicity. *Brain*. 2004 May;127(Pt 5):1182-90. Epub 2004 Mar 26. PubMed PMID: 15047591.
8. Pluchinotta, M. balancing act between stratification and EMT in cultured human thymic epithelial cells. Thesis 2016.
http://infoscience.epfl.ch/record/218089/files/EPFL_TH6942.pdf
9. Tanaka, J. et al. (2004) Cytolytic activity and regulatory functions of inhibitory NK cell receptor-expressing T cells expanded from granulocyte colony-stimulating factor-mobilized peripheral blood mononuclear cells. *Blood*. 104 (3): 768-74.

Pictures:

Flow Cytometry: Staining of Human peripheral blood lymphocytes with Rat Anti Human HLA ABC antibody (Cat.-No SM2012P)



1. Murine 4T1 cells were mixed with Human DU-145 cells and stained with $1 \mu\text{g}$ HLA Class I ABC antibody (Cat.-No SM2012P). Anti-Rat Cy3 was used as a secondary antibody. Red stained cells mark the HLA Class I ABC positive Human DU-145 cells. 2. Murine 4T1 cells were stained with $1 \mu\text{g}$ HLA Class I ABC antibody (Cat.-No SM2012P). Anti-Rat Cy3 was used as a secondary antibody. Murine 4T1 cells are negative for HLA Class I ABC staining. *Pictures by courtesy of Fraunhofer ITEM, Regensburg, Germany.*

