Product Information

Material Number: 612889
Alternate Name: CD8α; CD8A; CD8 alpha; Leu2a; MAL; T8; p32
Size: 100 Tests
Vol. per Test: 5 µl
Clone: SK1
Immunogen: Human Peripheral Blood T Cells
Isotype: Mouse (BALB/c) IgG1, κ
Reactivity: QC Testing: Human
Workshop: IT51,74; III T118,152,571
Storage Buffer: Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The SK1 monoclonal antibody specifically binds to CD8 alpha (CD8α). CD8α is a type I transmembrane glycoprotein and a member of the immunoglobulin superfamily. CD8α is expressed by the majority of thymocytes, by subpopulations of αβ T cells and γδ T cells and by some NK cells. Cell surface CD8α is expressed either as a disulfide-linked homodimer (CD8αα) or as a heterodimer (CD8αβ) when disulfide-bonded to a CD8β beta chain (CD8ββ). CD8-positive αβ T cells coexpress both CD8αα homodimers and CD8αβ heterodimers whereas some γδ T cells and NK cells express CD8αα homodimers. CD8 plays important roles in T cell activation and selection. The extracellular IgSF domain of CD8α binds to a non-polymorphic determinant on HLA class I molecules (α3 domain) and enables CD8 to function as a co-receptor with MHC class I-restricted TCR during T cell recognition of antigen. The cytoplasmic domain of CD8α associates with Lck, a Src family protein tyrosine kinase that is involved in intracellular signaling.

The antibody was conjugated to BD Horizon BUV805 which is part of the BD Horizon Brilliant™ Ultraviolet family of dyes. This dye is a tandem fluorochrome with an Ex Max near 350 nm and an Em Max near 805 nm. BD Horizon Brilliant BUV805 can be excited by the ultraviolet laser (355 nm) and detected with a 820/60 nm filter and a 770 nm LP.

Flow cytometric analysis of CD8 expression on human peripheral blood lymphocytes. Human whole blood was stained with either BD Horizon™ BUV805 Mouse IgG1, κ Isotype Control (Cat. No. 612897; dashed line histogram) or BD Horizon BUV805 Mouse Anti-Human CD8 antibody (Cat. No. 612889; solid line histogram). The erythrocytes were lysed with BD FACSTM Lysing Solution (Cat. No. 349202). The fluorescence histogram showing CD8 expression (or Ig Isotype control staining) was derived from gated events with the forward and side light-scatter characteristics of intact lymphocytes. Flow cytometry and data analysis were performed using a BD LSRFortessa™ X-20 Cell Analyzer System and FlowJo™ software.

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with BD Horizon BUV805 under optimum conditions, and unconjugated antibody and free BD Horizon BUV805 were removed.

Application Notes

Application

Flow cytometry Routinely Tested
Recommended Assay Procedure:

BD™ CompBeads can be used as surrogates to assess fluorescence spillover (Compensation). When fluorochrome-conjugated antibodies are bound to BD CompBeads, they have spectral properties very similar to cells. However, for some fluorochromes there can be small differences in spectral emissions compared to cells, resulting in spillover values that differ when compared to biological controls. It is strongly recommended that when using a reagent for the first time, users compare the spillover on cells and BD CompBeads. This will ensure that BD CompBeads are appropriate for your specific cellular application.

For optimal and reproducible results, BD Horizon Brilliant Stain Buffer should be used anytime two or more BD Horizon Brilliant dyes are used in the same experiment. Fluorescent dye interactions may cause staining artifacts which may affect data interpretation. The BD Horizon Brilliant Stain Buffer was designed to minimize these interactions. More information can be found in the Technical Data Sheet of the BD Horizon Brilliant Stain Buffer (Cat. No. 563794/566349) or the BD Horizon Brilliant Stain Buffer Plus (Cat. No. 566385).

Suggested Companion Products

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<th>Name</th>
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<td>554657</td>
<td>Stain Buffer (BSA)</td>
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Product Notices

1. This reagent has been pre-diluted for use at the recommended Volume per Test. We typically use 1 × 10^6 cells in a 100-µl experimental sample (a test).
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
5. BD Horizon Brilliant Ultraviolet 805 is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,575,303; 8,354,239.
6. BD Horizon Brilliant Stain Buffer is covered by one or more of the following US patents: 8,110,673; 8,158,444; 8,575,303; 8,354,239.
7. Species testing during development may have been performed with a different format of the same clone. Selected applications have been tested for cross-reactivity.

References


