Purified Anti-Human CD23 Antibody[EBVCS2]

catalog number: **E-AB-F1382A**

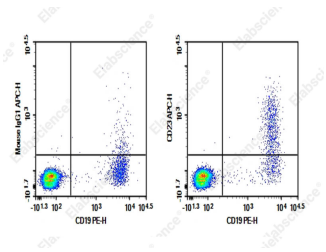
Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

Description

Reactivity	Human
Immunogen	Recombinant Human CD23 protein
Host	Mouse
Isotype	Mouse IgG1, κ
Clone	EBVCS2
Purification	>98%, Protein A/G purified
Buffer	Phosphate-buffered solution, pH 7.2, containing 0.05% non-protein stabilizer. Dialyze to completely remove the stabilizer prior to labeling.

Applications	Recommended Dilution
FCM	≤ 0.2 μg per million cells in 100 μL volume

Data



Human peripheral blood lymphocytes were stained with 0.2 μg Purified Anti-Human CD23 Antibody[EBVCS2] (Right) and 0.2 μg Mouse IgG1, κ Isotype Control (Left), followed by APC-conjugated Goat Anti-Mouse IgG Secondary Antibody, then anti-Human CD19 PE-conjugated Monoclonal Antibody.

Preparation & Storage

Storage	Store at 4°C valid for 12 months or -20°C valid for long term storage, avoid freeze / thaw cycles.
Shipping	Ice bag

Background

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CD23 (also named B cell differentiation antigen) is a member of subgroup II of the C-type (Ca++-dependent) lectin superfamily. Human CD23 is a 47 kDa type II transmembrane glycoprotein that is expressed by a wide variety of cell types. The full-length receptor is 321 amino acids (aa) in length and contains a 274 aa extracellular region, a 26 aa transmembrane segment, and a 21 aa cytoplasmic domain. The extracellular region contains a C-type lectin domain and a connecting stalk with coiled-coil topography. The lectin domain binds both protein and carbohydrate in an apparently Ca++ independent manner. The coiled-coil region contributes to oligomerization. The lectin domain in human CD23 (aa 162-284) is 64%, 62% and 68% aa identical to the lectin domains in mouse, rat and bovine CD23, respectively. In the cytoplasmic region, two FC isoforms exist which arise from alternate start sites. The “a” (or long) isoform begins with the sequence MEEGQYS and is constitutively expressed by B cells. It is believed to participate in IgE-mediated endocytosis. The “b” (or short) isoform begins with MNPPSQ and is induced on a wide variety of cell types by IL-4. Fcb reportedly contributes to IgE-mediated phagocytosis (13). Fcb expressing cells include eosinophils, monocytes, visceral smooth muscle and intestinal epithelium. At least four soluble forms of CD23 are known to exist. They range in molecular weight from 25 kDa to 37 kDa, with the 25 kDa form predominating in sera. Soluble CD23 (sFc) is generated by metalloprotease (ADAM8; ADAM15; ADAM28) and cysteine-protease activity. Cleavage usually occurs between aa 150-160. It is unclear if sequential metalloprotease-cysteine protease activity is necessary for the generation of all soluble forms. Both soluble and membrane-bound CD23 show bioactivity. Ligands for CD23 include CD21, IgE, CD11b, and CD11c. CD23 binding to CD11b and Cd11c on monocytes results in oxidative product generation and proinflammatory cytokine release. On B cells, sCD23 induces IgE secretion by binding CD21. Conversely, secreted IgE will, in turn, bind B cell membrane CD23, rendering it unavailable for cleavage, and thus shutting down IgE production.