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## Human CD123(IL-3R $\alpha$ )-muIg/Biotin\*

**CATALOG#:** 545-030

**QUANTITY:** 25  $\mu$ g

**CONCENTRATION:** 0.5 mg/ml

**Molecular Structure:** A soluble molecule consisting of the extracellular domain of mature human CD123 fused to murine IgG2a Fc.

Mature CD123(EC) (307 aa):

tkedpnpptnlrmkakaqqltwdlnrnvtdecvkdadysmpavnnsycqfgaislcevtntvrvanppfstwilfpensgkpwagaentcwihdvdfllscswavvgpadvqvdlylnvanrrqqyec  
lhyktdaqgtrigrfdidrlssgsqshilvrgrsaafgipctdkfvvfsqieiltppnmtakcnkthsfmhwkmrshfrkfryelqikrmmqpviteqvrdrtsfqlnpgtytvqirarervyeflsawstpqrfc  
cdqeeantrawrtsllialglalvcfvic

Linking amino acids (2aa): **gt**

Murine IgG2aFc (233aa):

eprgptikpcppckcpapnllggpsvfifppkikdvlmislspivtcvvdvseddpdvqiswfvnnvevhtaqtqthredynstlrvvsalpiqhqdwmvsgkefkckvnmkdlpapiertiskpkgsrapqvy  
vlpppeemtkkqvltcmvtdfmpediyvewtngkltelnykntepvlidsdgsyfmysklrvekknwvemsysscvsvehghnhhttkfsrtpgk

Predicted nonglycosylated monomeric weight: **61.6 kd.**

**Transfectant Cell Line:** CHO

**INFORMATION:** Human CD123 (Interleukin 3 Receptor) is a 70kD type I transmembrane molecule, and is the low affinity receptor for the cytokine IL-3, which can stimulate proliferation or differentiation. When paired in a heterodimer with CD131 (IL-3 R beta), it binds IL-3 with much higher affinity. CD123 is found on Myeloid precursors, Stem cells, a subset of T cells, some B cells Megakaryocytes, basophils, monocytes and epithelial cells. CD123 is present at high levels on many hematologic malignancies and antibodies(2) and CAR T cells (1) Antibodies against CD123 have been used successfully to combat Acute Myeloid Leukemia (2).

**References:** 1) Pizzitola I, Bonnet D, et al. (2014) *Leukemia* **28**(8): 1596-1605. doi: 10.1038/leu.2014.62 2) Jin L, Lock RB, et al. (2009) *Cell Stem Cell* **5**(1): 31-42. doi: 10.1016/j.stem.2009.04.018

**STORAGE CONDITIONS:** Store at 2 - 5°C. Freeze/Thawing is not recommended.

**PRODUCT STABILITY:** Product should retain activity for at least 6 months after shipping date when stored as recommended. Ship Date: \_\_\_\_\_

**BUFFER:** 50 mM Sodium Phosphate pH 7.5, 100 mM Potassium Chloride, 150mM NaCl, 5% Glycerol, 0.2% BSA, 0.04% NaN<sub>3</sub> (as a preservative).

**PRODUCTION:** Fusion protein from (low FBS containing) tissue culture supernatant of transfectants was purified using affinity and size exclusion chromatography), and reacted with NHS-Biotin. Unconjugated Biotin was removed from conjugate by desalting.

**PERFORMANCE:** Human CD123-muIg/Biotin was reactive in EIA utilizing coated recombinant IL-3 capture, detection with SA/HRP and TMB/H<sub>2</sub>O<sub>2</sub> substrate. Binding was easily observed at 20 ng/ml.

\* *Research Use Only. Not for use in Diagnostic procedures.*

**Binding of CD123-muIg/Biotin +SA/HRP to immobilized IL-3**

