For Research Use Only

Mouse CD3/CD28 T Cell Activation Beads Kit

Catalog Number: KMS311

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Description

T lymphocytes are activated through MHC class II molecules on antigen-presenting cells (APC). After activation, T cells expand rapidly and secrete various cytokines. The Mouse CD3/CD28 T Cell Activation Beads Kit is designed to activate and expand mouse T cells. This kit contains Biotinylated anti-mouse CD3 and CD28 antibodies, as well as cell culture grade Streptavidin magnetic beads. After Streptavidin magnetic beads are loaded with biotinylated CD3/CD28, they mimic antigen presenting cells and can activate resting T lymphocytes from mouse splenocytes or purified T lymphocytes. After 2-3 days of activation, magnetic beads can easily be removed by magnet. Further T lymphocytes expansion may require specific additives for in *vitro* culture.

Components

KMS311-10:
· MS311A-10: 200μL 0.5mg/mL functional grade Biotin-CD3 (clone: 145-2C11)
· MS311B-10: 200μL 0.5mg/mL functional grade Biotin-CD28 (clone: 37.51.1)
· MS311C-10: 500μL cell culture grade Streptavidin magnetic beads ($2x10^8$ beads/mL)
KMS311-100:
· MS311A-100: 2000μL 0.5mg/mL functional grade Biotin-CD3 (clone: 145-2C11)
· MS311B-100: 2000μL 0.5mg/mL functional grade Biotin-CD28 (clone: 37.51.1)
· MS311C-100: 5000μL cell culture grade Streptavidin magnetic beads ($2x10^8$beads/mL)

Package

10test/100test

Storage

2-8°C

Storage buffer

Biotin antibody buffer: PBS and 0.5% HSA, pH7.4
Streptavidin bead buffer: PBS and 0.5% HSA, 2mM EDTA, pH7.4

Reactivity

Mouse

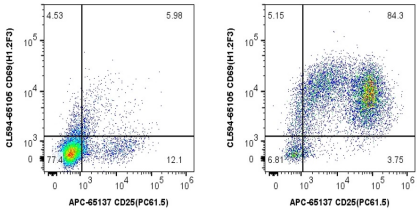
Beads diameter

2.7 μm

Recommend usage

20μL Biotin-CD3, 20μL Biotin-CD28 and 50μL Streptavidin magnetic beads; mix well and add 10μL buffer for incubation. 100μL antibody-loaded magnetic beads contains $1x10^7$ magnetic particles and is used to activate $1x10^7$ mouse splenocytes or purified mouse T lymphocytes in 2mL cell culture media (1:1 bead to cell ratio).

Validation Data



Representative example of BALB/c mouse splenocyte activation: 10^7 BALB/c mouse splenocytes in 2 ml cell culture media were activated by Mouse CD3/CD28 T cell Activation Beads Kit for 2 days at a 1.3:1 bead to cell ratio. Unstimulated cells (left panel) and stimulated cells (right panel) were stained with flow antibodies:... APC-CD25 and CL594-CD69. Total viable lymphocytes were gated.