

12-4194: Phospho-MAPKAPK2 (Thr334) (Clone: H2) rabbit mAb APC conjugate

Clonality :	Monoclonal
Clone Name :	MAPKAPK2T334-H2
Application :	FACS
Reactivity :	Human, Mouse
Conjugate :	APC
Format :	Conjugated
Alternative Name :	MAP kinase-activated protein kinase 2, MAPK-activated protein kinase 2, MAPKAP kinase 2, MAPKAPK-2, MK2
Isotype :	Rabbit IgG1k
Immunogen Information :	A synthetic phospho-peptide corresponding to residues surrounding Thr334 of human phospho MAPKAPK-2.

Description

Mitogen-activated protein kinase (MAPK)-activated protein kinase 2 (phospho MAPKAPK-2 or phospho MK2) is phosphorylated and activated by the p38 MAPK and it is known to transduce a range of extracellular signals that result in inflammatory response, cell division and differentiation, apoptosis, and cell motility (1,2). p38 MAPK through MK2 regulates biosynthesis of tumor necrosis factor alpha (TNF alpha) and other cytokines (3). In addition, MK2 is involved with phosphorylating of heat shock protein 27 (Hsp27)(4), pointing to prominent role for MK2 in cancer promotion. MK2 is also activated after DNA damage (5,6), resulting in cell cycle arrest such that cells have the capacity to repair their DNA and continue to proliferate. p38 MAPK phosphorylate MK2 in response to stress stimuli at Thr222, Ser272 and Thr334 (7). Thr334 phosphorylation serves as a switch for phospho MAPKAPK-2 nuclear import and export. In resting cells, p38 MAPK and MK2 form a complex in the nucleus (7). Cellular stress causes the phosphorylation of p38 MAPK by upstream kinases, such as MAPK kinase 3. The activated p38 MAPK then phosphorylates MK2 at Thr222, Ser272, and/or Thr334. When activated at Thr334, both p38 MAPK and MK2 translocate to the cytoplasm. Phosphorylation at Thr222 within the activation loop is crucial for MK2-dependent activation of several target substrates, including enzymes, proteins that regulate cytoskeleton motility, mRNA-binding proteins, and regulators of the cell cycle and apoptosis (8).

Product Info

Amount :	10 Tests / 100 Tests
Content :	1X PBS, 0.09% NaN ₃ , 0.2% BSA
Storage condition :	Store at 2-8°C. Avoid repeated freeze and thaw cycles.

Application Note

For flow cytometric staining, the suggested use of this reagent is 5 μ L per million cells or 5 μ L per 100 μ L of staining volume. It is recommended that the reagent be titrated for optimal performance for each application.

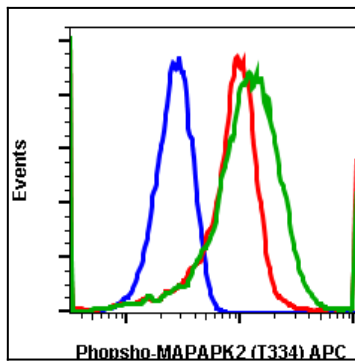


Fig-1: Flow cytometric analysis of NIH3T3 cells, untreated and unstained as negative control (blue) or untreated and stained (red) or treated with UV plus TPA and stained (green) using Phospho-MAPKAPK2(T334) antibody MAPKAPK2T334-H2 APC conjugate.