CREATIVE BIOMART®
Assay Kit

Phospho-p38 MAPK (Thr180+Tyr182) Translocation Assay Kit (Cell-Based)

Product Information

Cat

Kit-1064

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Description

Mitogen-activated protein kinases (MAPKs) are proline-directed serine and threonine protein kinases that regulate numerous physiological and pathophysiological cell responses. p38 MAPKs belong to a class that plays an important role during inflammatory processes, and their expression is upregulated by inflammatory and stress stimuli (cytokines, ultraviolet irradiation, osmotic and heat shock). p38 MAPKs are also involved in autophagy, apoptosis, cell differentiation, and are implicated in the regulation of inflammatory mediators levels such as tumor necrosis factor-a (TNF-a) and cyclooxygenase-2 (COX-2). Accumulating evidence suggests that p38 MAPKs play an important role in arthritis, and inflammation of the liver, kidney, brain, and lung. Diseases induced by chronic inflammation, including gastritis, colitis, dermatitis, rheumatoid arthritis, pulmonary diseases and type II diabetes affect millions of people every year. Therefore, p38 is an important target in better understanding of inflammation and development of novel treatments. p38 MAPK is activated following phosphorylation at Thr180/Tyr182 by upstream MKK6 and MKK3 kinases. While in quiescent cells p38 localizes to both nucleus and cytosol, stress induced conformational changes within the active site result in selective translocation of activated-p38 into the nucleus. Thus, the selective nuclear accumulation of p38 could be a mechanism to facilitate the phosphorylation of p38 MAPK nuclear targets. Phospho-p38 MAPK (Thr180+Tyr182) Translocation Assay Kit (Cell-Based) provides a valuable tool to detect the nuclear translocation of activated p38 in fixed mammalian cells.

Applications

Detection of nuclear translocation of phosphorylated-p38 in mammalian cells

Storage

-20°C

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Phospho-p38 MAPK (Thr180+Tyr182) Translocation Assay Kit (Cell-Based)

Shipping	
Gel Pack	
Size	
100 assays	
Kit Components	
Fixative Solution Blocking BufferWash BufferPhospho-p38 MAPK Primary Antibody (100X)p38 Secondary Antibody (100X)Thrombin DAPI (1000X)	
Target Species	
Human, mouse, rat	
Detection method	Fluorescence microscope capable of measuring EX/EM at 550 nm and equipped with UV filter for DAPI
Features & Benefits	
Detection of nuclear translocation of phosphorylated-p38 in mammalian cells Screening effectors of p38 MAPK signaling pathway Detection of cellular stress, DNA damage, heat shock, and pro-inflammatory stimuli	

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