MAPKAP-kinase 2 (Human) Assay/Inhibitor Screening Assay Kit

Cat. No. Kit-0540 **Lot. No.** (See product label)

SPECIFICATION

Product Overview	MAPKAP-kinase 2 (Human) Assay/Inhibitor Screening Assay Kit is a single-site, non-quantitative immunoassay for MAPKAP-kinase 2 activity. Plates are pre-coated with a substrate corresponding to recombinant LSP1 (Leukocyte Specific Protein), which contains a serine residue that are phosphorylated by MAPKAP-kinase 2 (MAPK-activated protein kinase 2). The detector antibody specifically detects only the phosphorylated form of serine-204 on LSP1.
Description	Aurora-A is a key member of a closely related subgroup of serine/threonine kinases that belongs to the Drosophila aurora and Saccharomyces cerevisiae Ipl1 kinase family, and both are essential for chromosome segregation and centrosome functions. Aurora-A kinase has been shown to contribute to oncogenic transformation and is frequently overexpressed and amplified in many human tumor types. It has been reported that amplification of Aurora-A in approximately 12% of primary breast tumors, as well as in breast, ovarian, colon, prostate, neuroblastoma, and cervical cancer cell lines. Additionally, high expression of Aurora-A mRNA was detected in tumor cell lines without evidence of gene amplification. Ectopic expression of Aurora-A in mouse NIH 3T3 cells led to the appearance of abnormal centrosome number (amplification) and transformation in vitro. Finally, overexpression of Aurora-A in near-diploid human breast epithelial cells revealed similar centrosome abnormality, as well as induction of aneuploidy. These findings suggested that Aurora-A is a critical kinase-encoding gene, whose overexpression leads to centrosome amplification, chromosomal instability, and transformation in mammalian cells.

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Target Species	Human
Usage	For research use only (RUO)
Storage	Store the kit at 4°C.
Kit Components	Aurora-A positive control: One vial containing 8 units/100 µ Aurora-A enzyme. Positive control should be added to the first well at 40 m units/well. For instance, diluted positive control 1:20, use 10 µ for 1 assay. (Unused Aurora-A enzyme should be stored in aliquots at -70°C.)10X Staurosporine (10 µM): 1 mM stock solution (DMSO) diluted 1:100 in Kinase Buffer.Pipettors: 2-20 µ, 20-200 µ and 200-1000 µ precision pipettors with disposable tips. Precision repeating pipettor. Wash bottle or multichannel dispenser for plate washing. Microcentrifuge and tubes for sample preparation. Vortex mixer.Plate reader capable of measuring absorbance in 96-well plates at dual wavelengths of 450 nm/540 nm. Dual wavelengths of 450/550 or 450/595 nm can also be used. The plate can also be read at a single wavelength of 450 nm, which will give a somewhat higher reading. 500 or 1000 mL graduated cylinder.Reagent reservoirs.Deionized water of the highest quality.Disposable paper towels.

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