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VRK1 (m2): 293T Lysate: sc-124593

BACKGROUND

Human vaccinia-related kinases 1 and 2 (VRK1/2) are NLS-containing, serine/threonine poxvirus-related kinases that are similar to casein kinase I family members. These VRK kinases phosphorylate transcription factors related to stress responses, such as p53. As an upstream regulator of p53, VRK1 is capable of phosphorylating phosphoinositide-dependent kinase-1, Histone 2b and myelin basic protein. VRK1 colocalizes with ATF-2 in the nucleus and can form a stable complex. VRK1 phosphorylates ATF-2 mainly on Thr 73, stabilizing the ATF-2 protein and increasing its intracellular level. VRK1 phosphorylates human p53 in Thr 18 and disrupts p53-MDM2 interaction *in vitro*. VRK1 phosphorylates c-Jun in Ser 63 and Ser 73 *in vitro* (the same residues targeted by the N-terminal kinase of c-Jun (JNK)), and activates c-Jun dependent transcription.

REFERENCES

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7. Sevilla, A., et al. 2004. c-Jun phosphorylation by the human vaccinia-related kinase 1 (VRK1) and its cooperation with the N-terminal kinase of c-Jun (JNK). *Oncogene* 23: 8950-8958.
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CHROMOSOMAL LOCATION

Genetic locus: Vrk1 (mouse) mapping to 12 F1.

PRODUCT

VRK1 (m2): 293T Lysate represents a lysate of mouse VRK1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

VRK1 (m2): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive VRK1 antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.