

# Vimentin (Ser 71): sc-24612

## BACKGROUND

Santa Cruz Biotechnology, Inc. offers a range of synthetic peptide substrates engineered specifically for *in vitro* kinase assays. *In vitro* kinase assays measure the activity of kinases outside of their natural cellular environment, facilitating characterization of kinase function, substrate specificity, and the effects of inhibitors or activators on kinase activity. SCBT's peptide substrates are designed with precision, and offer exceptional performance in studying kinase activity in order to advance signal transduction proteomics research.

## REFERENCES

1. Inada, H., et al. 1999. Balance between activities of Rho kinase and type 1 protein phosphatase modulates turnover of phosphorylation and dynamics of Desmin/Vimentin filaments. *J. Biol. Chem.* 74: 34932-34939.
2. Togashi, H., et al. 2000. Functions of a Rho-specific guanine nucleotide exchange factor in neurite retraction. Possible role of a proline-rich motif of KIAA0380 in localization. *J. Biol. Chem.* 275: 29570-29578.
3. Nakamura, Y., et al. 2000. Localized phosphorylation of Vimentin by rho-kinase in neuroblastoma N2a cells. *Genes Cells* 5: 823-837.
4. Terriac, E., et al. 2017. Vimentin levels and Serine 71 phosphorylation in the control of cell-matrix adhesions, migration speed, and shape of transformed human fibroblasts. *Cells* 6: 2.
5. Li, Z., et al. 2017. Checkpoint kinase 1-induced phosphorylation of O-linked  $\beta$ -N-acetylglucosamine transferase regulates the intermediate filament network during cytokinesis. *J. Biol. Chem.* 292: 19548-19555.

## SOURCE

Origin:	Synthetic
Organism:	<i>Homo sapiens</i> (human)
Recognition Motif:	R/K-X-X-S/T and K/R-X-X-S/T
Accession:	NP_003371 vimentin ( <i>Homo sapiens</i> )
Sequence:	69 RLRSSVPGVR 78

## PRODUCT

Synthetic peptide substrates engineered specifically for *in vitro* kinase assays are provided in a single vial. Each vial contains 500  $\mu$ g (0.5 mg) synthetic peptide in 100  $\mu$ l (0.1 ml) [5.0  $\mu$ g/ $\mu$ l].

## APPLICATIONS

Peptide substrates for kinase assays are used to investigate the activity and specificity of kinases. These small (< 20 amino acid) synthetic peptide molecules mimic the natural substrates of kinases, and allow researchers to measure phosphorylation events catalyzed by kinases.

## STORAGE

Store at -20° C; stable for one year from the date of shipment. Avoid excessive freeze/thaw. Non-hazardous. No MSDS is required.

## PREPARATION METHOD

Synthetic peptide substrates are designed from literature, and engineered by solid-phase peptide synthesis. After the addition of each amino acid, any remaining protecting groups are removed, and the peptide is washed to remove any unreacted reagents or side products. This process is repeated iteratively until the desired peptide sequence is obtained. Once the peptide chain is complete, it is cleaved from the solid support and the protecting groups are removed. The peptide is then purified and supplied in a single vial [0.5 mg/0.1 ml].

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.