

**VHR**

VH1-related phosphatase
human, recombinant, *E. coli*

Cat. No.	Amount
PR-350	20 µg

For general laboratory use.

Shipping: shipped on dry ice

Storage Conditions: store at -80 °C

Additional Storage Conditions: avoid freeze/thaw cycles

Shelf Life: 12 months

Accession number: NM_004090

Purity: > 90 % (SDS-PAGE)

Form: liquid (Supplied in 50 mM HEPES pH 7.4, 40 mM NaCl, 1 mM EDTA and 1 mM DTT)

Description:

The mammalian dual-specificity protein-tyrosine phosphatase VHR (for <U>VH</U>-<U>r</U>-<U>elated) has been identified as a novel regulator of extracellular regulated kinases (ERKs). Vaccinia Virus VH1-related Phosphatase (VHR), also known as Dual-Specificity Phosphatase 3 (DUSP3), removes phosphate groups from tyrosine, serine, and threonine residues. It belongs to a family of phosphatases that selectively dephosphorylate MAP kinases. VHR has been shown to act as a phosphatase for several members of the MAP kinase family including ERK1, ERK2, and JNK. It is a target for the ZAP-70 kinase, and phosphorylation of VHR at tyrosine 138 leads to a downregulation of ERK2 activity. Its welldefined biochemistry has made VHR useful in screening assays for compounds that inhibit phosphatases.

Selected References:

Todd *et al.* (1999) Extracellular regulated kinases (ERK) 1 and ERK2 are authentic substrates for the dual-specificity protein-tyrosine phosphatase VHR. A novel role in down-regulating the ERK pathway. *J. Biol. Chem.* **274**:13271.

Alonso *et al.* (2001) Inhibitory role for dual specificity phosphatase VHR in T cell antigen receptor and CD28-induced Erk and Jnk activation. *J. Biol. Chem.* **276**:4766.