

DESCRIPTION

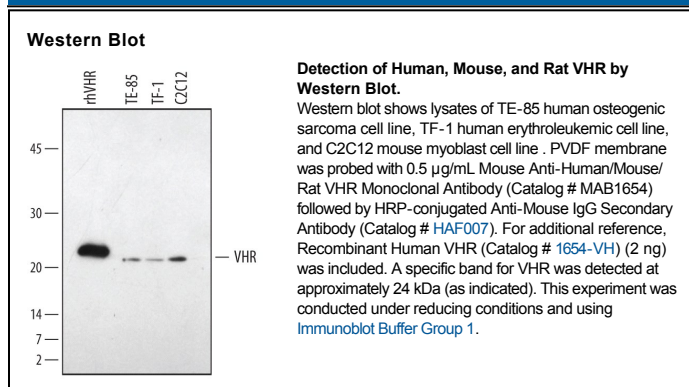
Species Reactivity	Human/Mouse/Rat
Specificity	Detects human, mouse, and rat VHR in Western blots.
Source	Monoclonal Mouse IgG _{2A} Clone # 237020
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human VHR Ser2-Pro185 Accession # P51452
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	0.5 µg/mL	See Below

DATA



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Vaccinia Virus VH1-related Phosphatase (VHR), also known as Dual-Specificity Phosphatase 3 (DUSP3), removes inorganic phosphate groups covalently attached to tyrosine, serine and threonine residues in proteins (1). It belongs to a family of phosphatases that selectively dephosphorylate MAP kinases. VHR has been shown to dephosphorylate cellular ERK1, ERK2 and JNK, but not p38 (2, 3). Phosphorylation of VHR at tyrosine 138 by ZAP-70 enhances inhibition of ERK2, suggesting a role for VHR in modulating T-cell receptor responses (3). The enzymatic mechanism for VHR has been studied in detail (4) and its X-ray crystal structure has been characterized (5). Its well-defined biochemistry has made it useful in screening assays for compounds that inhibit phosphatases (6).

References:

1. Ishibashi, T. *et al.* (1992) *Proc. Natl. Acad. Sci. USA* **89**:12170.
2. Todd, J.L. *et al.* (1999) *J. Biol. Chem.* **274**:13271.
3. Alonso, A. *et al.* (2003) *Nat. Immunol.* **4**:44.
4. Zhang, Z.-Y. *et al.* (1995) *Biochemistry* **34**:16088.
5. Yuvaniyama, J. *et al.* (1996) *Science* **272**:1328.
6. Ueda, K. *et al.* (2002) *FEBS Lett.* **525**:48.