

Qty: 100µg/400 µL Rabbit anti-Vav2 For Research Use Only Catalog No. 36-2000 Lot No.

# Rabbit anti-Vav2

## FORM

This polyclonal antibody is supplied as a 400 µl aliquot at a concentration of 0.25 mg/ml in phosphate buffered saline (pH 7.4) containing 0.1% sodium azide. This antibody is epitope-affinity purified from rabbit antiserum.

# PAD: ZMD.278

## IMMUNOGEN

Synthetic peptide derived from the C terminal region of the human Vav2 protein.

## SPECIFICITY

This antibody is specific for the human Vav2 protein. On Western blots, it identifies a single band at ~100 kDa.

## REACTIVITY

Reactivity has been confirmed with human T47D breast carcinoma, SK-OV3 ovarian carcinoma and U-937 lymphoma cell lysates.

Sample	Western Blotting	ELISA	Immuno- precipitation	
Human	+++	ND	+++	
Immunogen	N/A	+++	ND	
(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable N/A, Not Determined ND)				

# USAGE

Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

ELISA:0.1-1 μg/mLWestern Blotting:1-3 μg/mLImmunoprecipitation:1-5 μg/mL

## STORAGE

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Store at 2-8°C for up to one month. Store at -20°C for long-term storage. Avoid repeated freezing and thawing.

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## BACKGROUND

Vav2 is an oncoprotein member of the Dbl family of proteins that serves as a guanine nucleotide exchange factor (GEF) for the Rho family of Ras-related GTPases.<sup>1</sup> Vav2 possesses a C-terminal pleckstrin homology (PH) domain and a tandem Dbl homology (DH) domain which interacts with Rho family GTPases to catalyze GDP release.<sup>1-2</sup> The PH domain serves as a negative regulator of DH domain GEF activity, which is promoted by phosphatidylinositol 4, 5-phosphate (PIP2) and is antagonized by the PI3K product, phosphatidylinositol3, 4, 5-phosphate (PIP3).<sup>3</sup> Hence, PI3K may facilitate the activation of Vav. Vav2 also contains a cysteine-rich domain (CRD) that is a positive modulator for DH domain function.<sup>4</sup> Vav2 is widely expressed in human tissues.<sup>5-6</sup>

The SH2 domain of Vav2 associates with the receptor tyrosine kinases EGFr<sup>7-9</sup> and PDGFr,<sup>8</sup> binding preferentially to the phosphorylated residues pTyr-992 and pTyr-1148 of EGFr<sup>10</sup> and directly to multiple autophosphorylation sites of PDGFr.<sup>8</sup> Overexpression of Vav2 has been shown to be sufficient to activate its oncogenic potential.<sup>6</sup> In ovarian tumor cells, the binding of hyaluronan to its receptor (CD44v3) and the recruitment of Grb2 and p185<sup>HER2</sup> to the CD44v3-Vav2 complex activates Vav2-mediated Rac1 and Ras signaling, leading to ovarian tumor cell migration and growth.<sup>11</sup>

#### REFERENCES

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# **RELATED PRODUCTS**

Product	Clone/PAD*	Cat. No.
Rabbit anti-PI3K C alpha	ZMD.146	52-6177
Rabbit anti-Rho-GDI-a	NGA-25	51-1000
Mouse anti-EGFr	31G7	28-0005
Rat anti-v-H-ras	Y13-259	33-7000
Protein A	Sepharose <sup>®</sup> 4B	10-1041
rec-Protein G	Sepharose <sup>®</sup> 4B	10-1241
*PAD: Polyclonal Antibody Designation		

Conjugate	ZyMAX™ Goat x Rabbit IgG (H+L)	ZyMAX™ Goat x Mouse IgG (H+I )
Durified	91 6100	91 6500
Fullieu	01-0100	61-0300
FITC	81-6111	81-6511
TRITC	81-6114	81-6514
Cy™3	81-6115	81-6515
Cy™5	81-6116	81-6516
HRP	81-6120	81-6520
AP	81-6122	81-6522
Biotin	81-6140	81-6540

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