# Mouse Wnt-9b Antibody

Monoclonal Rat $IgG_{2B}$ Clone # 964742

Catalog Number: MAB36691

## DESCRIPTION

| | |
|---|---|
| **Species Reactivity** | Mouse |
| **Specificity** | Detects mouse Wnt-9b in direct ELISAs. |
| **Source** | Monoclonal Rat $IgG_{2B}$ Clone # 964742 |
| **Purification** | Protein A or G purified from hybridoma culture supernatant |
| **Immunogen** | Chinese hamster ovary cell line CHO-derived recombinant mouse Wnt-9b<br>Met1-Arg359<br>Accession # O35468 |
| **Formulation** | Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*Small pack size (-SP) is supplied either lyophilized or as a 0.2 μm filtered solution in PBS. |

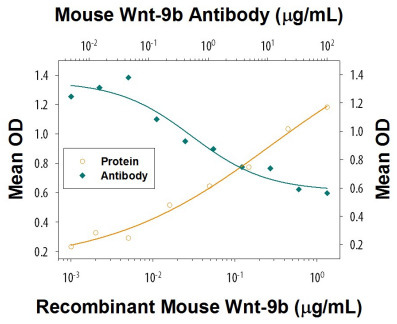
## APPLICATIONS

**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.*

| | |
|---|---|
| **Neutralization** | Measured by its ability to neutralize Wnt-9b-induced alkaline phosphatase production in the C3H10T1/2 mouse embryonic fibroblast cell line. The Neutralization Dose ($ND_{50}$) is typically 125-750 ng/mL in the presence of 400 ng/mL Recombinant Mouse Wnt-9b. |

## DATA

**Neutralization**




**Alkaline Phosphatase Production Induced by Wnt-9b and Neutralization by Mouse Wnt-9b Antibody.** Recombinant Mouse Wnt-9b (Catalog # 3669-WN) induces alkaline phosphatase production in the C3H10T1/2 mouse embryonic fibroblast in a dose-dependent manner (orange line). Alkaline Phosphatase Production elicited by Recombinant Mouse Wnt-9b (400 ng/mL) is neutralized (green line) by increasing concentrations of Rat Anti-Mouse Wnt-9b Monoclonal Antibody (Catalog # MAB36691). The $ND_{50}$ is typically 125-750 ng/mL.

## PREPARATION AND STORAGE

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|---|---|
| **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.<br>*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.**<br>● 12 months from date of receipt, -20 to -70 °C as supplied.<br>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.<br>● 6 months, -20 to -70 °C under sterile conditions after reconstitution. |



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## BACKGROUND

Mouse Wnt-9b, previously called Wnt-14b or Wnt-15, is one of about 19 vertebrate members of the Wingless-type MMTV integration site (Wnt) family of highly conserved, cysteine-rich secreted glycoproteins important for normal developmental processes (1-3). Wnts mainly transduce signals by binding to receptors of the Frizzled family, in conjunction with a coreceptor of the low-density lipoprotein receptor-related protein family (LRP-5 or -6) (1, 2). The 359 aa mouse Wnt-9b precursor contains a 336 aa mature region with 24 conserved cysteines (3). Mature mouse Wnt-9b shares 93%, 98%, 92%, 92% and 91% aa identity with human, rat, canine, equine and bovine Wnt-9b, respectively. It is evolutionarily related to Wnt-9a and Wnt-3, which share 63% and 32% aa identity, respectively (4). Wnt-9b mRNA is expressed in late embryos and in adult kidney, with lesser amounts in brain and liver (3, 4). It appears to direct mesenchymal-to-epithelial transition in the kidney and other tissues (5). During kidney development, it is expressed in the ureteric bud and induces mesonephric and metanephric tubulogenesis, nephron development, and caudal extension of the Mullerian duct, acting upstream of Wnt-4 (5-7). Induction is dependent on β-catenin activity, implicating the canonical signaling pathway (7). Mice devoid of Wnt-9b die shortly after birth due to kidney agenesis, while low expression results in small kidneys with fewer nephrons (1, 5, 6). Mutations of Wnt-9b also cause incompletely penetrant cleft lip and palate in mice, indicating its involvement with facial midline morphogenesis (8, 9). It has weak transforming activity compared to other transforming Wnts (4).

**References:**

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