Mouse Wnt-5b Alexa Fluor® 750-conjugated Antibody

Monoclonal Rat IgG_{2A} Clone # 325004

Catalog Number: FAB3006S

100 µg

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Wnt-5b in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant mouse Wnt-5a, -8a, -8b, -9b, -10a, -10b, or recombinant human Wnt-7b is observed.
Source	Monoclonal Rat IgG_{2A} Clone # 325004
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant mouse Wnt-5b Ser55-Ser95 and Lys246-Glu315 connected by a Gly-Ser linker Accession # NP_033551
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.*

Immunocytochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Wnt proteins are secreted glycoproteins with a conserved pattern of 23-24 cysteine residues that play critical roles in both carcinogenesis and embryonic development. Wnts bind to receptors of the Frizzled family, sometimes in conjunction with other membrane-associated proteins such as LRPs or proteoglycans. Downstream effects of Wnt signaling occur through different intracellular components, depending on which pathway is activated. Three pathways have been characterized: the canonical Wnt/β-catenin pathway, the Wnt/Ca^{2+} pathway, and the planar cell polarity (1-3). Wnt-5b is a 49 kDa glycoprotein of the subgroup of Wnts that is implicated in the Wnt/Ca^{2+} pathway (3-6). It is not axis-inducing in *Xenopus* embryos and only weakly transforms C57MG mammary epithelial cells. The non-canonical Wnt pathway can inhibit canonical Wnt/β-catenin signaling (3). Mouse Wnt-5b is synthesized as a 359 amino acid (aa) precursor that contains a 17 aa signal sequence and a 342 aa mature region. It is ubiquitously expressed at low but increasing levels throughout embryonic development (4, 5, 7). In adult mice, Wnt-5b is expressed in heart, liver, brain, lung, testes, kidney, and pancreas (4, 8). Wnt-5b appears to promote adipogenesis. It is upregulated in early adipogenesis. Also, Wnt-5b overexpression in 3T3-L1 cells partially inhibits canonical Wnt suppression of adipogenesis (9, 10). Human Wnt-5b polymorphisms have been associated with Type II diabetes (9). Although Wnt-5a and Wnt-5b share 83% aa identity, they show differential expression and regulation of cyclin D1 and p130 during endochondral bone development. Together, they appear to coordinate chondrocyte proliferation and differentiation (11). Mature mouse Wnt-5b shows 94%, 98%, 90%, and 88% aa sequence identity with mature human, rat, chick, and *Xenopus* Wnt-5b, respectively.

PRODUCT SPECIFIC NOTICES

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Bio-Techne®
Global | bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL: 1.612.379.2956
USA | TEL: 800.343.7475 Canada | TEL: 855.668.8722 Europe | Middle East | Africa TEL: +44.0.1235.529449
China | info.cn@bio-techne.com TEL: 400.821.3475