Mouse/Rat Wnt-5a Alexa Fluor® 750-conjugated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF645S
100 µg

DESCRIPTION

Species Reactivity	Mouse/Rat
Specificity	Detects mouse and rat Wnt-5a in direct ELISAs and Western blots. In direct ELISAs, approximately 5% cross-reactivity with recombinant mouse (rm) Wnt-5b is observed and less than 2% cross-reactivity with rmWnt-1, rmWnt-3a, rmWnt-4, rmWnt-11,
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant mouse Wnt-5a peptide Gln254-Cys334 Accession # P22725
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.*

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	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 that contain a conserved pattern of 23-24 cysteine residues. Wnts play critical roles in both carcinogenesis and embryonic development for a variety of organisms. 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, 2).

Wnt-5a is part of the subgroup of Wnts that are not axis-inducing in *Xenopus* embryos and do not transform C57MG mammary epithelial cells. This subgroup is also implicated in the Wnt/Ca2+ pathway, playing roles in cell movements and cell adhesion (3). This non-canonical Wnt pathway can inhibit canonical Wnt/β-catenin signaling. In Wnt-5a deficient mouse embryos, β-catenin accumulates in the limb bud suggesting that Wnt-5a normally promotes degradation of β-catenin (4). Likewise, in *Xenopus* embryos Wnt-5a antagonizes the ability of the canonical Wnt subgroup to induce a secondary axis (5). Wnt-5a is implicated in various types of cancer and has complex roles. It acts as a tumor suppressor for mammary, B-cell, colon, and uroepithelial cancer cells but is up-regulated in melanomas, where expression levels correlate with severity of metastasis (3). Furthermore, aberrant Wnt-5a signaling results in other diseases such as rheumatoid arthritis (6). Like other developmental growth factors Wnt-5a has diverse roles in development. They are too numerous to enunciate here, as functions span from early anterior-posterior development and gastrulation movements to maintaining hematopoietic stem cell population, lung morphogenesis, and limb outgrowth. Mouse and human Wnt-5a share 97% amino acid identity.

PRODUCT SPECIFIC NOTICES

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