

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Wnt-16b in ELISA.
Source	Monoclonal Mouse IgG _{2B} Clone # 948309
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human Wnt-16 Asn30-Lys365 Accession # Q9UBV4
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 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-16 is a 40 kDa protein within the Wnt family of secreted, highly conserved, cysteine-rich, palmitoylated cell signaling glycoproteins that play important roles in vertebrate developmental pattern formation, cell fate decision, axon guidance, and tumor formation (1-3). Wnt-16a and Wnt-16b isoforms in humans differ in the signal sequence and the first two amino acids (aa) of the mature protein (2, 3). Wnt-16b is the more conserved isoform and is widely expressed, while Wnt-16a is expressed mainly in the human pancreas (3). Mature human Wnt-16b shares 92%, 93%, and 95% aa sequence identity with mouse/rat, rabbit/porcine/equine, and bovine Wnt-16, respectively. Wnt-16 expression is detected on uterine stroma adjacent to the luminal epithelium during implantation (4). It is up-regulated during the first embryonic lymphoid progenitor differentiation (5). Congenital heart defects correlate with elevated Wnt-16 in mouse embryos and human amniotic fluid (6). Low cortical bone thickness and bone mineral density correlate with deletion of Wnt-16 in mice and a Wnt-16 missense SNP in humans (7). Wnt-16 is over-expressed in cells undergoing replicative senescence, and is up-regulated in articular cartilage by injury and osteoarthritis (8, 9). Wnt-16b expression in skin is up-regulated in human basal cell carcinomas, enhancing cell survival (10). Its expression is also up-regulated by DNA damage (radiation and chemotherapy) in stroma surrounding prostate tumors, causing enhanced survival and treatment resistance in the tumor cells (11). Pre-B acute lymphoblastic leukemia with t(1;19) translocation, creating an E2A-Pbx1 fusion protein, also causes up-regulation of Wnt-16 that confers resistance to apoptosis (12, 13). Wnt-16 signaling through both canonical and JNK-mediated (non-canonical) pathways is reported (8-10).

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