

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Wnt-16b in ELISA.
<b>Source</b>	Monoclonal Mouse IgG <sub>2B</sub> Clone # 948309
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Chinese hamster ovary cell line CHO-derived recombinant human Wnt-16 Asn30-Lys365 Accession # Q9UBV4
<b>Conjugate</b>	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
<b>Formulation</b>	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

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	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).

## PRODUCT SPECIFIC NOTICES

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