

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Wnt-4 in direct ELISAs. In direct ELISAs, approximately 10-15% cross-reactivity with recombinant human Wnt-3A and recombinant mouse Wnt-10B is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human Wnt-4 Ser23-Arg351 Accession # P56705
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 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.

ELISA 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-4 is a 38-42 kDa member of the Wnt family of secreted glycoproteins, which act as short-range signaling molecules via Frizzled receptors and a cascade of intracellular signals in vertebrate embryogenesis (1-2). Human Wnt-4 is synthesized as a 351 amino acid (aa) precursor with a 22 aa signal sequence and a 329 aa mature chain. The mature chain contains two potential sites for N-linked glycosylation. Relative to other members of the Wnt family, Wnt-4 contains 83 conserved aa, including 21 cysteines (1). Mature human Wnt-4 shares 99%, 98% and 99% aa sequence identity with mature mouse, rat and canine Wnt-4, respectively. Wnt-4 has been shown to play a critical role in the development of the reproductive system and in the formation of the kidneys, adrenals, pituitary gland, and mammary tissues (3-6). In the development of the reproductive system, Wnt-4 expression is down-regulated in the developing gonad after E11.5, although it persists in the developing ovary (2, 6). Targeted deletion of Wnt-4 results in masculinization of XX mice, with rudimentary development of the masculine internal (Wolffian) ducts and degeneration of the female (Mullerian) reproductive tract (2, 6). In addition to its involvement in urogenital development, Wnt-4 is also expressed in the perichondrium of the long bones (7), and promotes osteoblast differentiation (8). Wnt-4 may also be associated with abnormal proliferation in human breast tissue (9). In humans, mutations in Wnt-4 are the cause of SERKAL syndrome, a syndrome consisting of female to male sex reversal, renal, adrenal, and lung dysgenesis, and developmental defects (3), and Rokitsansky-Kuster-Hauser syndrome, which is characterized by utero-vaginal atresia in otherwise phenotypically normal females with normal 46, XX karyotype (10).

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