Human Dkk-3 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1118

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Dkk-3 in direct ELISAs and Western blots. In direct ELISAs, approximately 35% cross-reactivity with recombinant mouse Dkk-3 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human Dkk-3 Ala22-Ile350 Accession # Q9UBP4
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

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.*

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Human Dkk-3 (Catalog # 1118-DK)
Immunohistochemistry	5-15 µg/mL	Immersion fixed paraffin-embedded sections of human lung

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Dkk-3, also known as REIC (Reduced Expansion in Immortalized Cells), is one of four numbered members of the Dickkopf family of Wnt antagonists (1). Dkk-3 is a secreted monomer expressed in many normal human tissues, most strongly in heart, brain and spinal cord (1, 2), and during early embryonic development in the mouse (3). N-glycosylation at up to four sites preceding or between two conserved cysteine-rich motifs results in expression of a 45-65 kDa glycoprotein (1, 4). The cysteine-rich motifs contain 10 cysteines each, with prokineticin and colipase families containing sequences similar to those of the second motif (1, 5). Human Dkk-3 shows 82%, 88%, 85%, and 53% amino acid (aa) identity with mouse, bovine, canine, and chick Dkk-3, respectively, and 37-45% aa identity with other human Dkk family members. Several lines of evidence implicate Dkk-3 as a negative growth regulator. Dkk-3 is downregulated in many tumors as compared to normal cells, sometimes by loss of heterozygosity (4, 6). Downregulation by CpG hypermethylation in acute lymphoblastic leukemia is correlated with faster progression and shorter survival (7). Release of cultured cells from serum starvation results in downregulation of Dkk-3 in late G1 phase of the cell cycle (6). Over-expression of Dkk-3 results in tumor cell-line-specific growth inhibition, induction of apoptosis, and decreased tumorigenicity in nude mice (2, 4, 6). The prototype Dickkopf member, Dkk-1, antagonizes Wnt family signaling by binding to Wnt receptors LRP5 and LRP6 (low-density lipoprotein receptor-related proteins) and promoting their internalization (1, 9, 10). Results are less straightforward for Dkk-3, where some studies show binding to LRP5/6 while others do not. These effects appear to be dependent on the cells and conditions used (1, 6-10).

References:

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