Mouse Dkk-4 Alexa Fluor® 594-conjugated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF3105T
100 µg

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Dkk-4 in direct ELISAs and Western blots. In Western blots, less than 5% cross-reactivity with recombinant human Dkk-4, recombinant mouse (rm) Dkk-1, rmDkk-2, and rmDkk-3 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Dkk-4 Leu19-Ile221 (Arg67Ser, Arg70Ser) Accession # Q8VEJ3
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 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.

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

Dickkopf related protein 4 (Dkk-4) is a member of the Dickkopf protein family that includes Dkk-1, -2, -3, and -4 and a related protein, Soggy (1). Expression of Dkk-4 has only been shown with sensitive PCR techniques during early embryonic development in mice (2), in differentiated human ES cells (3), or in mice that express dominant-active β-catenin elevating Wnt signaling in the forebrain (4). Dkk proteins are secreted proteins that are synthesized as precursors with an N-terminal signal peptide; all have two conserved cysteine-rich domains separated by a linker region which contains a potential furin type proteolytic cleavage site. The domains contain 10 cysteines each; prokineticin and colipase families show a configuration of cysteines similar to the second motif (5). Mouse Dkk-4 shows 91%, 72% and 71% amino acid (aa) identity with rat, human and canine Dkk-4, respectively, and 40-46% aa identity with other mouse Dkk proteins. Dkk-4 is predicted as a 25 kDa protein, but transfection of 293T cells produces a shorter (15-17 kDa) form containing only the second cysteine-rich domain, as well as longer (30-32 and 40 kDa) forms that do not appear to be glycosylated or form covalent multimers (1). Of the four Dkk proteins, Dkk-4 is the most like Dkk-1. Both are unequivocal antagonists of the canonical Wnt signaling pathway (1, 6), which is activated by Wnt protein engagement of a receptor complex composed of the Frizzled proteins and one of two low-density lipoprotein receptor-related proteins, LRP5 or LRP6 (7). Dkk-1 and Dkk-4 antagonize Wnt by direct high-affinity binding to LRP5/6, forming ternary complexes of LRP5/6 with the Kremens protein Krm2. Internalization of the complex is triggered, making LRP5/6 unavailable for interaction with Wnt ligands (6-9).

PRODUCT SPECIFIC NOTICES

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