Human NOV/CCN3 Alexa Fluor® 647-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 209808

Catalog Number: FAB1640R

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human NOV/CCN3 in direct ELISAs and Western blots. In direct ELISAs and Western blots, this antibody does not cross-react with recombinant mouse NOV, recombinant human (rh) CTGF, or rhWISP-1.
Source	Monoclonal Mouse IgG_1 Clone # 209808
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human NOV/CCN3 Thr32-Met357 Accession # P48745
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 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

NOV, also called CCN3, is one of six CCN (CYR61/CTGF/NOV) secreted proteins which share a common multimodular organization (1 - 4). NOV/CCN3 contains an N-terminal IGFBP domain that appears to be non-functional and a vWF type C and thrombospondin type I domain which mediate oligomerization and matrix interactions, respectively (1, 2). The C-terminal cysteine knot domain interacts with several partners, including the matrix protein fibulin 1C (5), Notch-1 (6), and CCN2, with which it may heterodimerize (2). NOV/CCN3 also interacts with the gap junction protein Connexin43 and mediates suppression of proliferation (7). It also binds the calcium binding protein S100A4 and promotes calcium channel activation (8). The 357 amino acid (aa), 44 kDa human NOV/CCN3 shares 80% aa identity with mouse, rat and dog NOV/CCN3, and 78% aa identity with cow NOV/CCN3. NOV/CCN3 also shows 38 - 50% aa identity with other family members including WISP proteins, except for WISP-2/CCN5 which lacks the cysteine knot (1). NOV/CCN3 is widely expressed developmentally, especially in muscle, endothelium, nervous system, adrenal cortex and chondrocytes (1 - 4). In transformed cells, a 32 kDa N-terminally truncated form lacks the signal sequence is localized to the nucleus. Truncation allows a C-terminal nuclear localization sequence to be active (9). Nuclear NOV/CCN3 acts as a transcriptional repressor but promotes proliferation, presumably by interfering with growth control (9). Full length NOV/CCN3 is a secreted matricellular protein which inhibits cell growth. Interaction of NOV/CCN3 with integrins $\alpha_v\beta_3$ and $\alpha_5\beta_1$ mediates endothelial cell adhesion, chemotaxis, and promotes angiogenesis (10, 11). Over-expression of NOV/CCN3 downregulates myogenic genes such as MyoD (12).

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