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Datasheet for 200-301-B10S

NAG-1 Antibody

Overview

Description:	Anti-NAG-1 (N-terminal specific) (MOUSE) Monoclonal Antibody - 200-301-B10S
Item No.:	200-301-B10S
Size:	25 µL
Applications:	ELISA, WB
Reactivity:	H. sapiens (Human)
Host Species:	Mouse

Product Details

Background:	Non-steroidal anti-inflammatory drug (NSAID) activated gene (NAG-1) is a member of the transforming growth factor-beta (TGF-beta) superfamily. NAG-1 is also known as Macrophage Inhibitory Cytokine-1 (MIC-1), Growth Differentiation Factor 15 (GDF15), Placental Bone Morphogenetic Protein (PLAB), or Prostate Derived Factor (PDF). NAG-1 is expressed in human placenta, prostate and colon. It possesses antitumorigenic and proapoptotic activities. NAG-1 expression is dramatically increased in inflammation, injury and malignancy. Increase of NAG-1 expression is a feature of many cancers including breast, colon, pancreas and prostate. In a number of studies, NAG-1 expression was increased by a number of NSAIDs. This increase in expression may correlate with the chemopreventive effect NSAIDs seem to have with certain cancers. NAG-1 expression is also induced by PPAR gamma ligands and by several dietary compounds such as conjugated linoleic acids (CLAs), naturally occurring fatty acids in ruminant food products, indoles, epicatechin gallate, and genistein. Induced expression of NAG-1 results in stimulation of apoptosis and inhibition of cell growth. Inhibition of NAG-1 induced expression by small interference RNA (siRNA) results in repression of induced apoptosis. NAG-1 expression is regulated by a numbers of transcription factors such as ERG-1 and Sp1. EGR-1 may be necessary for NSAID-induced NAG-1 expression. The study of expression of NAG-1 proteins, including variants, is important to define their potential role as serum biomarkers for cancer diagnosis, treatment monitoring, epidemiology study, and nutrition surveys.
Synonyms:	mouse anti-NAG1 Antibody, NAG-1, GDF15, MIC-1, nonsteroidal anti-inflammatory drug-activated gene, NSAID-activated gene 1 protein, growth differentiation factor 15, macrophage inhibitory compound 1, prostate-derived factor
Host Species:	Mouse
Clonality:	Monoclonal

Clone ID:	23G10.F8
Format:	IgG1

Target Details

Gene Name:	GDF15
Reactivity:	H. sapiens (Human)
Immunogen Type:	Peptide
Immunogen:	This Protein A purified antibody was prepared by repeated immunizations with a synthetic peptide corresponding to a region near the amino terminal end of human NAG-1 protein. A residue of cysteine was added to facilitate coupling to KLH.
Purity/Specificity:	This product was purified from concentrated tissue culture supernatant Protein A chromatography. This antibody specifically reacts with the amino terminal end of human NAG-1 protein from human tissues. A BLAST analysis was used to suggest partial reactivity with NAG-1 from chimpanzee and macaque based on a 92% homology. Multimeric forms of NAG-1 may be detected. Cross-reactivity with NAG-1 from other sources has not been determined.
Relevant Links:	• UniProtKB - Q99988 • NCBI - Q99988.3 • GeneID - 9518

Application Details

Tested Applications:	ELISA, WB
Application Note:	This Protein A purified anti-NAG1 antibody has been tested by ELISA and western blotting for human NAG-1 protein. For detection of NAG-1 in human serum, a sandwich ELISA is suggested using this antibody in combination with anti-NAG-1/GDF15 C-terminal specific antibodies. This antibody is useful in dual antibody immunometric assays (EIA). Specific conditions for reactivity should be optimized by the end user. Expect bands in western blots of approximately 14 kDa in size corresponding to NAG-1 monomer using the appropriate cell lysate or extract.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:200,000
WB:	1:1,000

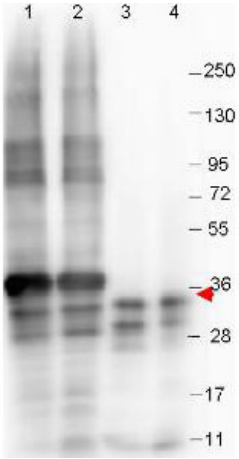
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C or below prior to opening. This vial contains a relatively low volume of reagent (25 µL). To minimize loss of volume dilute 1:10 by adding 225 µL of the buffer stated above directly to the vial. Recap, mix thoroughly and briefly centrifuge to collect the volume at the bottom of the vial. Use this intermediate dilution when calculating final dilutions as recommended below. Store the vial at -20°C or below after dilution. Avoid cycles of freezing and thawing.
Expiration:	Expiration date is three (3) months from date of receipt.

Images



Western Blot
Western blot shows detection of recombinant NAG-1 protein (arrow) present in Pichia pastoris whole cell lysates: lane 1 - yeast cell lysate expressing NAG-1 H variant with SUMO expression tag at 36 kDa; lane 2 - yeast cell lysate expressing NAG-1 D variant with SUMO expression tag at 36 kDa; lane 3 - yeast cell lysate expressing NAG-1 H variant; and lane 4 - yeast cell lysate expressing NAG-1 D variant. All lysates were run under reducing conditions. Primary antibody was used at a 1:1000 dilution in TBS containing 1% BSA and 0.2% Tween, and reacted overnight at 4°C. For detection, a 1:40,000 dilution of peroxidase conjugated Gt-a-Mouse IgG secondary antibody (610-103-121) was used in Blocking Buffer for Fluorescent Western Blotting (MB-070) for 30 min at room temperature. Molecular weight estimation was made by comparison to prestained MW markers. Image was captured using the BioRad Versadoc™ 4000MP Imaging System.

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