Human GASP-2/WFIKKN Alexa Fluor® 647-conjugated Antibody

Monoclonal Mouse IgG_{2B} Clone # 289827

Catalog Number: FAB21361R

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human GASP-2/WFIKKN in ELISAs. In sandwich immunoassays, no cross-reactivity with recombinant human GASP-1 is observed.
Source	Monoclonal Mouse IgG_{2B} Clone # 289827
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human GASP-2/WFIKKN Ala20-Asp548 Accession # Q96NZ8
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.*

ELISA Capture (Matched Antibody Pair)	Optimal dilution of this antibody should be experimentally determined.
ELISA Detection (Matched Antibody Pair)	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

Growth and differentiation factor-associated serum protein-2 (GASP-2) cDNA encodes a 548 amino acid protein that contains a 19 amino acid signal sequence and is comprised of many conserved domains: WAP, follistatin/Kazal, immunoglobulin, two tandem Kunitz, and netrin (1). Based on the order of these conserved domains, GASP-2 is also known as WFIKKN (1). Another related protein which contains the same domain structure is called WFIKKNRP (WFIKKN-related protein), or GASP-1 (2, 3). WAP, follistatin, Kunitz and netrin domains are all implicated in protease inhibition, and the GASP proteins may be multivalent protease inhibitors (1, 4). Tests at R&D Systems have measured the ability of GASP-2 to inhibit trypsin cleavage of the fluorogenic peptide substrate Mca-RPKPVE-Nval-WRK(Dnp)-NH_2 (R&D Systems Catalog # ES002). The IC_{50} value was approximately 10 nM, as measured in a reaction mixture containing 1.0 nM trypsin, 10 µM ES002, 50 mM Tris, 10 mM CaCl2, 0.15 M NaCl, pH 7.5.

GASP-1 and -2 show distinct expression patterns both in the developing fetus and the adult. In the developing fetus, GASP-2 is abundant in the lung, skeletal muscle and liver while GASP-1 expression is highest in the brain, skeletal muscle, thymus and kidney (3). In the adult, GASP-2 is expressed primarily in the pancreas, liver, and thymus while GASP-1 is in the ovary, testis, and brain (3). Further characterization shows that GASP-1 inhibits myostatin (GDF-8) and the highly related protein, GDF-11, but not Activin or TGF-β *in vitro* (2). Although, this kind of activity has not been reported for GASP-2, tests at R&D Systems have determined that GASP-2 shows similar inhibitory activity towards myostatin as GASP-1. By amino acid sequence, human GASP-2 is 55% identical to human GASP-1.

PRODUCT SPECIFIC NOTICES

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