

Rabbit Monoclonal Antibody to Human Tumor-Associated Calcium Signal Transducer 2

Cat. No. CAB11611RH Lot. No. (See product label)

SPECIFICATION

Product Overview Rabbit Monoclonal Antibody to Human Tumor-Associated Calcium Signal Transducer 2

Species Human

Source Rabbit

Antigen Description

Human TROP2, also referred to as tumor associated calcium signal transducer 2 (TACSTD2), GA733-1 or M1S1, is a cell surface glycoprotein highly expressed by human carcinomas. TROP2 encoding by an intronless gene was originally defined by the monoclonal antibody GA733, and is a member of a family of at least two type I membrane proteins. The other known member is GA733-2, also called EpCAM and TROP1. It has been suggested by studies that the GA733-1 gene was formed by the retroposition of the GA733-2 gene via an mRNA intermediate. The cytoplasmic tail of TROP2 possesses potential serine and tyrosine phosphorylation sites and a conserved phosphatidyl-inositol binding consensus sequence. TROP2 transduces an intracellular calcium signal and acts as a cell surface receptor, meanwhile is involved in the regulation of cell-cell adhesion. Accordingly, as a widespread stimulator of human cancer growth and a unique marker and causal factor of metastatic cancer, TROP2 is a possible candidate for diagnosis and molecular target therapy. Mutations of this gene result in gelatinous drop-like corneal dystrophy, an autosomal recessive disorder characterized by severe corneal amyloidosis leading to blindness.

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Specificity	Human TROP2 / TACSTD2. No cross-reactivity in ELISA with Human BCAM / CD239; Human VCAM1 / CD106; Human ICAM1 / CD54; Human CD146 / MCAM / MUC18; Human CD171 / NCAML1 / L1CAM; Human Cadherin-1 / E-cadherin / CDH1 / CD324
Immunogen	Recombinant human TROP2 protein
Isotype	Rabbit IgG
Clone	A31
Applications	Immunochemistry; Western blot; ELISA
Dilution	IHC-P: 1-10 µg/mL Western blot: This antibody can be used at 1 - 2 µg/mL with the appropriate secondary reagents to detect human TROP2 in WB. Using a DAB detection system, the detection limit for human TROP2 is approximately 0.5 ng/lane under non-reducing conditions. Use of this antibody under reducing conditions is not recommended Direct ELISA: This antibody can be used at 0.1- 0.2 µg/mL with the appropriate secondary reagents to detect human TROP2. The detection limit for human TROP2 is 0.00245 ng/well
Preparation	This antibody was obtained from a rabbit immunized with purified, human cell-derived, recombinant human TROP2 extracellular domain
Format	0.2 µm filtered solution in PBS with 5% trehalose
Storage	This antibody can be stored at 2-8°C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20 to -70 °C. Preservative-Free. Sodium azide is recommended to avoid contamination (final concentration 0.05%-0.1%). It is toxic to cells and should be disposed of properly. Avoid repeated freeze-thaw cycles.

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GENE INFORMATION

Gene Name	TACSTD2 tumor-associated calcium signal transducer 2 [Homo sapiens]
Official Symbol	TACSTD2
Synonyms	TACSTD2; tumor-associated calcium signal transducer 2; M1S1; EGP 1; GA733 1; TROP2; epithelial glycoprotein-1; cell surface glycoprotein TROP2; cell surface glycoprotein Trop-2; pancreatic carcinoma marker protein GA7331; pancreatic carcinoma marker protein GA733-1; gastrointestinal tumor-associated antigen GA7331; membrane component chromosome 1 surface marker 1; membrane component, chromosome 1, surface marker 1; 40kD glycoprotein, identified by monoclonalGA733; EGP1; GP50; EGP-1; GA7331; GA733-1;
Gene ID	4070
mRNA Refseq	NM_002353
Protein Refseq	NP_002344
MIM	137290
UniProt ID	P09758
Chromosome Location	1p32
Function	receptor activity;
Immunochemical staining of human TROP2 in human	

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mammary gland with
rabbit monoclonal
antibody . Positive
staining was
localized to
membrane of
alveolus epithelium.

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