Mouse SF20/MYDGF
Alexa Fluor® 700-conjugated Antibody

Recombinant Monoclonal Rabbit IgG Clone # 2562A
Catalog Number: IC1104N
100 µg

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse SF20/MYDGF in direct ELISAs. Detects human, mouse, and rat SF20/MYDGF in Western blots.
Source	Recombinant Monoclonal Rabbit IgG Clone # 2562A
Purification	Protein A or G purified from cell culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived mouse SF20/MYDGF Val25-Leu166 Accession # Q9CPT4
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and 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.*

	Recommended Concentration	Sample
Intracellular Staining by Flow Cytometry	0.25-1 µg/10^6 cells	Mouse Tramp-C1 cell line fixed with paraformaldehyde and permeabilized with saponin

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

Myeloid-Derived Growth Factor, or MYDGF, is a Bone marrow-derived monocyte protein, and it is correlated with enhanced metabolic activity, suppression of apoptosis, and stimulation of cell proliferation (1). MYDGF is expressed predominantly in inflammatory cells, such as monocytes and macrophages (1). Up-regulation of MYDGF expression was also found during adipocyte differentiation (2). Expression of MYDGF was induced in the circulation and heart tissue after myocardial infarction. It promotes cardiac myocyte survival by stimulating endothelial cell proliferation through a MAPK1/3-, STAT3- and CCND1-mediated signaling pathway, and inhibits cardiac myocyte apoptosis in a PI3K/AKT-dependent signaling pathway (1). MYDGF was found over-expressed in approximately two-thirds of Hepatocellular Carcinoma (HCC) tissues, and its expression was significantly positively correlated with that of alpha-fetoprotein (AFP) (3). In HCC, MYDGF could regulate cell proliferation through activating Akt/mitogen-activated protein kinase pathways (3). Mouse MYDGF shares 92% amino acid sequence identity with both human and rat MYDGF. Intriguingly, virtually all homologs of MYDGF have a C-terminal putative ER retention sequence BXEL (B: Arg, His, or Lys; X: variable residue; E: Glu; L: Leu), which has the potential to retain human MYDGF and its homologs in the ER, whereas truncated MYDGF without BXEL is secreted from the cell (4). However, the functions of these different forms remain unclear.

References:

1. Korf-Klingebiel, M. *et al.* (2015) Nat. Med. **10**:3778.
2. Wang, P. *et al.* (2004) Cell. Mol. Life Sci. **61**:2405.
3. Sunagozaka, H. *et al.* (2011) Int. J. Cancer **129**:1576.
4. Bortnov, V. *et al.* (2018) J. Biol. Chem. **293**:13166.

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