

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human ROBO1 in ELISAs.
Source	Monoclonal Mouse IgG ₁ Clone # 770502
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human ROBO1 Met1-Ala858 Accession # Q9Y6N7
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *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
Flow Cytometry	0.25-1 µg/10 ⁶ cells	HepG2 human hepatocellular carcinoma cell line

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. <ul style="list-style-type: none"> 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

ROBO1 (Roundabout-like protein 1) is a 190-230 kDa member of the ROBO/roundabout receptor family. It is expressed by commissural axons from multiple nuclei, and is also found on vascular endothelium, bronchial epithelium, and syncytiotrophoblasts. It interacts with Slit and DCC to temporally regulate the migration of axonal processes. The human ROBO1 precursor is a 1651 amino acid (aa) type I transmembrane protein. It contains a 25 aa signal sequence, followed by an 872 aa extracellular region (aa 26-897) that possesses five C2-type Ig-like domains (aa 68-541) and three fibronectin type III domains (aa 561-864) (SwissProt # Q9Y6N7). ROBO1 shows multiple isoform variants. The variant used here is termed ROBO1b/DUTT1 (Genbank # NP_598334), and it possesses an 18 aa substitution for aa 1-47, accompanied by a three aa insertion after Gln348, and a deletion of aa 939-947. ROBO1a, by contrast, possesses only the 18 aa substitution just described. A third isoform possesses the same changes as ROBO1b plus an additional deletion of aa 1013-1067, while a final variant utilizes an alternative start site at Met120. Proteolytic cleavage generates a soluble 120 kDa N-terminal fragment. Over aa 20-861, human ROBO1b shares 97% aa identity with mouse ROBO1.

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