Human Ret PE-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 132507

Catalog Number: IC718P
100 TESTS

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Ret in direct ELISAs and Western blots. In direct ELISAs and Western blots, 100% cross-reactivity with recombinant mouse Ret is observed.
Source	Monoclonal Mouse IgG_1 Clone # 132507
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*S. frugiperda* insect ovarian cell line *Sf* 21-derived recombinant human Ret/Fc Chimera Leu29-Arg635 Accession # P07949
Conjugate	Phycoerythrin Excitation Wavelength: 488 nm Emission Wavelength: 565-605 nm
Formulation	Supplied 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.

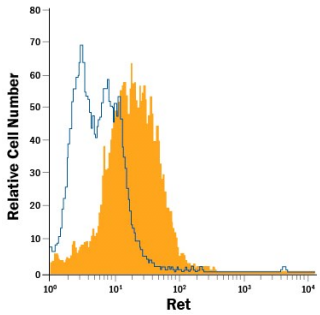
APPLICATIONS

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
Intracellular Staining by Flow Cytometry	10 µL/10^6 cells	See Below

DATA

Intracellular Staining by Flow Cytometry



Detection of Ret in SH-SY5Y Human Cell Line by Flow Cytometry. SH-SY5Y human neuroblastoma cell line was stained with Mouse Anti-Human Ret PE-conjugated Monoclonal Antibody (Catalog # IC718P, filled histogram) or isotype control antibody (Catalog # IC002P, open histogram). To facilitate intracellular staining, cells were fixed with Flow Cytometry Fixation Buffer (Catalog # FC004) and permeabilized with Flow Cytometry Permeabilization/Wash Buffer I (Catalog # FC005). View our protocol for Staining Intracellular Molecules.

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

The GDNF family of neurotrophic factors forms a subfamily within the TGF-β superfamily. These proteins are potent survival factors for various central and peripheral neurons during development and the adult animal. The GDNF family members (GDNF, neurturin, artemin and persephin) signal through multicomponent receptors that consist of the Ret receptor tyrosine kinase and one of four glycosyl-phosphatidylinositol (GPI)-linked ligand-binding subunits (GFRα-1-4) (1). GFRα-1 - 2, -3 and -4 are the preferred ligand-binding subunits for GDNF, neurturin, artemin and persephin, respectively. The Ret tyrosine-kinase receptor is a 170-175 kDa type I transmembrane glycoprotein that is encoded by the *c-ret* proto-oncogene (2,3). Mutations of the *ret* gene have been associated with various human diseases affecting tissues derived from the neural crest, including Hirschsprung's disease, multiple endocrine neoplasia MEN2A and MEN2B, and familial medullary thyroid carcinoma (4). Human and mouse Ret share 83% amino acid (aa) sequence identity (77% identity in the extracellular domain over aa 29-635). Although Ret does not bind GDNF ligands directly, in general, the extracellular domain of Ret binds the GDNF-GFR-α complex with high affinity and is a potent GDNF antagonist in the presence of soluble GFR-α (5-6).

References:

1. Wang, X. (2013) Biochim. Biophys. Acta. **1834**:2205.
2. Takahashi, M. and G.M. Cooper (1987) Mol. Cell Biol. **7**:1378.
3. Richardson, D.S. *et al.* (2012) Mol. Cell Biol. **23**:3838.
4. Mulligan, L.M. *et al.* (2014) Nat. Rev. Cancer **14**:173.
5. Ibanez, C.F. (2013) Cold Spring Harb. Perspect. Biol. **5**:a009134.
6. Plaza-Menacho, I. *et al.* (2014) Cell. Signal. **26**:1743.

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