

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IL-17RD in direct ELISA. Stains human IL-17RD transfected cells but not irrelevant transfectants in Flow Cytometry.
Source	Monoclonal Mouse IgG ₁ Clone # 309511
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human IL-17RD Ala27-Arg299 Accession # Q8NFM7
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 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	HEK293 human embryonic kidney cell line transfected with human IL-17 RD/SEF

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

Interleukin-17 receptor D (IL-17 RD), also known as SEF (Similar Expression to FGFs), is a type I transmembrane protein that is found in both the cytoplasm and plasma membrane (1-5). The gene for this protein belongs to a synexpression group originally identified in zebrafish where SEF is expressed along with FGF-3, FGF-8, Sprouty-2 and Sprouty-4 (6, 7). By alternate splicing, two transcript variants, potentially encoding three protein isoforms, exist. One is a full-length long form, one a shortened form that uses an alternate start site, and one an alternate splice form that removes the classic signal sequence (1-4). These isoforms have different expression patterns, subcellular localization, and function. The membrane-bound long form of human IL-17 RD is synthesized as a 739 amino acid (aa) precursor protein with a putative 27 aa signal peptide, a 272 aa extracellular domain, a 20 aa transmembrane segment and a 420 aa cytoplasmic domain. The extracellular domain contains one Ig-like domain and a fibronectin type III motif. The cytoplasmic domain shares homology with the intracellular domains of IL-17 receptor family members and shows one TIR (Toll/IL-1 Receptor) domain and a putative TRAF6-binding motif (2). Natural IL-17 RD has been shown to form homo-multimeric complexes (3). Unlike the alternate splice form of IL-17 RD that has a restricted pattern of expression, the full-length IL-17 RD isoform is expressed in most adult tissues and during embryonic development (3, 5). Functionally, IL-17 RD has been shown to be an inhibitor of FGF signaling. The molecule's extracellular domain does not seem to be involved. There is an interaction between the intracellular domains of FGFR1/2 and IL-17 RD that blocks ERK dissociation from MEK, thereby interfering with downstream ERK activation of nuclear Elk-1 (8). IL-17 RD has also been reported to interact with TAK1 and induce JNK activation and apoptosis (9).

References:

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4. Preger, E. *et al.* (2003) *Proc. Natl. Acad. Sci. USA* **101**:1229.
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8. Torii, S. *et al.* (2004) *Dev. Cell* **7**:33.
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