

DESCRIPTION

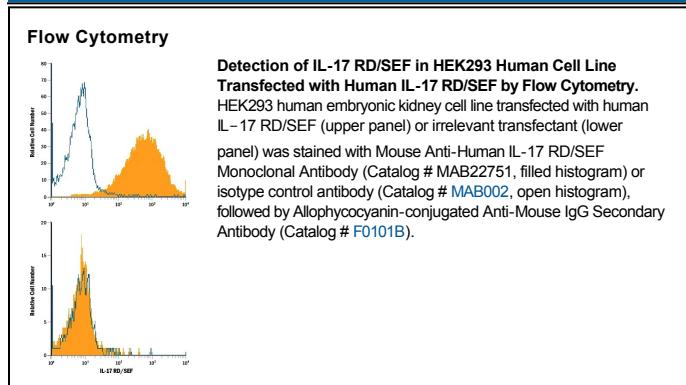
Species Reactivity	Human
Specificity	Detects human IL-17RD in direct ELISA. Stains human IL-17RD transfected cells but not irrelevant transfectants in Flow Cytometry.
Source	Monoclonal Mouse IgG ₁ Clone # 309511
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human IL-17RD Ala27-Arg299 Accession # Q8NFM7
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

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	2.5 µg/10 ⁶ cells	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	

DATA



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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:

1. Furthauer, M. *et al.* (2002) *Nat. Cell Biol.* **4**:170.
2. Xiong, S. *et al.* (2003) *J. Biol. Chem.* **278**:50273.
3. Yang, R-B. *et al.* (2003) *J. Biol. Chem.* **278**:33232.
4. Preger, E. *et al.* (2003) *Proc. Natl. Acad. Sci. USA* **101**:1229.
5. Lin, W. *et al.* (2002) *Mech. Dev.* **113**:163.
6. Tsang, M. *et al.* (2002) *Nat. Cell Biol.* **4**:165.
7. Kovalenko, D. *et al.* (2003) *J. Biol. Chem.* **278**:14087.
8. Torii, S. *et al.* (2004) *Dev. Cell* **7**:33.
9. Yang, X. *et al.* (2004) *J. Biol. Chem.* **279**:38099.