

**DESCRIPTION**

**Source** Mouse myeloma cell line, NS0-derived  
Gly28-Arg299, with a C-terminal 6-His tag  
Accession # NP\_602319

**N-terminal Sequence Analysis** Gly28

**Structure / Form** Monomer

**Predicted Molecular Mass** 31.6 kDa

**SPECIFICATIONS**

**SDS-PAGE** 54-60 kDa, reducing conditions

**Activity** Bioassay data are not available.

**Endotoxin Level** <0.01 EU per 1 µg of the protein by the LAL method.

**Purity** >95%, by SDS-PAGE under reducing conditions and visualized by silver stain.

**Formulation** Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

**PREPARATION AND STORAGE**

**Reconstitution** Reconstitute at 100 µg/mL in sterile PBS.

**Shipping** The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

**Stability & Storage** Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 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 and SEF is expressed along with FGF-3, -8, sprouty-2 (SPRY2) and SPRY4 (6, 7). Due to the presence of an alternate start site, there is one transcript that potentially gives rise to two isoforms. The first is a full-length long form and the second an N-terminally truncated form (2, 5). The significance and expression pattern of the short form are uncertain. The membrane-bound long form of mouse IL-17 RD is synthesized as a 738 amino acid (aa) precursor protein with a putative 27 aa signal peptide, a 272 aa extracellular domain, a 20 aa transmembrane segment and a 419 aa cytoplasmic domain (5). 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 homomultimeric complexes (3). 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). Ligands that interact with the extracellular domain of IL-17 RD have not been identified.

**References:**

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8. Torii, S. *et al.* (2004) *Dev. Cell* **7**:33.
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