

DESCRIPTION

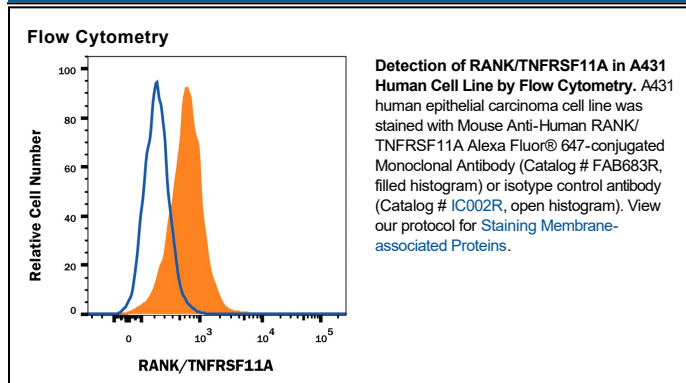
Species Reactivity	Human
Specificity	Detects human RANK/TNFRSF11A in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human (rh) 4-1BB, rhBAFF R, rhCD27, rhCD30, rhCD40, rhDR3, rhDR6, rhEDAR, rhFas, rhGITR, rhHVEM, rhLymphotoxinβ R, rhNGF R, rhOPG, rhTAJ, rhTNF RI, rhTNF RII, or recombinant mouse (rm) OX40, and rmRANK is observed.
Source	Monoclonal Mouse IgG ₁ Clone # 80704
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human RANK/TNFRSF11A extracellular domain Accession # Q9Y6Q6
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 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
Flow Cytometry	5 μL/10 ⁶ cells	See Below

DATA



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

RANK (receptor activator of NF-κB, also known as TRANCE receptor, osteoclast differentiation factor receptor [ODFR]) and TNFRSF11A is a member of the tumor necrosis factor receptor family. The full length human RANK cDNA encodes a type I transmembrane protein of 616 amino acids with a predicted 184 amino acid extracellular domain and a 383 amino acid cytoplasmic domain. The extracellular domain contains two potential N-linked glycosylation sites. RANK shares significant amino acid homology with other members of the TNF R family in its extracellular four cysteine-rich repeats. Human and murine RANK share 81% amino acid identity in their extracellular domains. RANK is widely expressed with highest levels in skeletal muscle, thymus, liver, colon, small intestine and adrenal gland. RANK is expressed in dendritic cells. In activated human peripheral blood T lymphocytes, RANK expression is induced by IL-4 and TGF-β. Multiple tumor necrosis factor receptor-associated factors (TRAFs) are involved in the signaling of RANK. TRANCE (TNF-related activation-induced cytokines, also known as RANK ligand [RANKL], osteoprotegerin ligand [OPGL], and osteoclast differentiation factor [ODF]) is the ligand for RANK. The biological functions mediated through RANK include activation of NF-κB and c-jun N-terminal kinase, enhancement of T cell growth and dendritic cell function, induction of osteoclastogenesis, and lymph node organogenesis. Soluble RANK is able to block TRANCE induced biological activity.

References:

1. Anderson, D.M. *et al.* (1997) *Nature* **390**:175.
2. Nakagawa, N. *et al.* (1998) *Biochem. Biophys. Res. Commun.* **245**:382.

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