# Data Sheet (Cat.No.TMPJ-00662)

TargetMol

## RANKL/TNFSF11/CD254 Protein, Human, Recombinant (E. coli)

### General Information

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| Synonyms: | Receptor activator of nuclear factor kappa-B ligand;Receptor activator of nuclear factor κ-B ligand;CD254;tumor necrosis factor ligand superfamily member 11;Osteoclast differentiation factor;TNFSF11;ODF;RANK L;OPGL |
| Protein Construction: | Ile140-Asp317 |
| Species: | Human |
| Expression Host: | E. coli |
| Accession: | O14788 |
| Molecular Weight: | 20 KDa (reducing condition) |
| AA Sequence: | Ile140-Asp317 |

### QC Testing

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| Biological Activity: | Loaded Recombinant Human OPG-Fc on Pro A Biosensor, can bind Human RANKL with an affinity constant of 1.83 pM as determined in BLI assay. (Regularly tested) |
| Purity: | Greater than 90% as determined by reducing SDS-PAGE. Greater than 90% as determined by SEC-HPLC. |
| Endotoxin: | < 0.1 ng/μg (1 EU/μg) as determined by LAL test. |
| Formulation: | Lyophilized from a solution filtered through a 0.22 μm filter, containing 20 mM Tris-HCl, 150 mM NaCl, pH 8.0. |

### Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

CD254, also known as RANKL, TNFSF11, TRANCE, OPGL and ODF, is a type II membrane protein of the tumor necrosis factor (TNF) superfamily, and affects the immune system and control bone regeneration and remodeling. RANKL is the ligand of nuclear factor (NF)-κB (RANK). When RANKL binds to RANK, it will undergo trimerization and

then bind to an adaptor molecule TNF receptor-associated factor 6 (TRAF6). This results in the activation of several downstream signaling cascades, including the NFκB, mitogen-activated protein kinases (MAPK), activating protein 1 (AP-1), and nuclear factor of activated T cells (NFATc1), resulting in the formation of multinucleated bone-resorbing osteoclasts. RANKL is widely expressed in skeletal muscle, thymus, liver, colon, small intestine, adrenal gland, osteoblast, mammary gland epithelial cells, prostate and pancreas.



Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481