# Data Sheet (Cat.No.TMPY-01992)

TargetMol

## Kallikrein 8/KLK8 Protein, Human, Recombinant (His)

### General Information

Synonyms: kallikrein-related peptidase 8;PRSS19;TADG14;NRPN;NP;HNP

Protein Construction: Val33-Gly260

Species: Human

Expression Host: HEK293 Cells

Accession: O60259-1

Molecular Weight: 26.07 kDa (predicted); 32-38 kDa (reducing condition, due to glycosylation)

### QC Testing

Biological Activity: Measured by its ability to cleave the fluorogenic peptide substrate: BOC-Val-Pro-Arg-AMC. The specific activity is >1200 pmol/min/μg. (QC Test)

Purity: > 95% as determined by Bis-Tris PAGE; > 95% as determined by HPLC

Endotoxin: < 1.0 EU/μg of the protein as determined by the LAL method.

Formulation: Lyophilized from 0.22 μm filtered solution in 20 mM HEPES, 150 mM NaCl, 8% trehalose, 0.05% Brij-35, 5 mM Benzamidine (pH 7.5).

### 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:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. 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

Kallikrein-8, also known as Neuropsin, Serine protease 19, Serine protease TADG-14, Tumor-associated differentially expressed gene 14 protein, and KLK8 is a secreted protein that belongs to the peptidase S1 family and Kallikrein subfamily. It is a serine protease that is capable of degrading some proteins such as casein, fibrinogen, kininogen, fibronectin, and collagen type IV. Kallikrein-8 / KLK8 plays a role in the formation and maturation of orphan and small synaptic boutons in the Schaffer-collateral pathway. It regulates Schaffer-

collateral long-term potentiation in the hippocampus and is required for memory acquisition and synaptic plasticity. It is involved in skin desquamation and keratinocyte proliferation and plays a role in the secondary phase of pathogenesis following spinal cord injury. It also cleaves L1CAM in response to increased neural activity. It induces neurite outgrowth and fasciculation of cultured hippocampal neurons. Kallikrein-8 / KLK8 is expressed at high levels in serum, ascites fluid, and tumor cytosol of advanced-stage ovarian cancer patients and may serve as a marker of ovarian cancer. Kallikrein-8 / KLK8 may have potential clinical value for disease diagnosis or prognosis and it may also be a useful therapeutic target.

Reference

Yoshida S.,et al.,(1998), Sequence analysis and expression of human neuropsin cDNA and gene. Gene 213:9-16.
Underwood L.J.,et al., (1999), Cloning of tumor-associated differentially expressed gene-14, a novel serine protease overexpressed by ovarian carcinoma.Cancer Res. 59:4435-4439.
Mitsui S.,et al.,(1999), A novel form of human neuropsin, a brain-related serine protease, is generated by alternative splicing and is expressed preferentially in human adult brain.Eur. J. Biochem. 260:627-634.



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