Data Sheet (Cat.No.TMPY-01416)

TargetMol

OLFM4 Protein, Human, Recombinant (His)

General Information

Synonyms:	hGC-1;GC1;OLM4;bA209J19.1;GW112;olfactomedin 4;OlfD;hOLfD;UNQ362
Protein Construction:	A DNA sequence encoding the human OLFM4 (NP_006409.3) (Met 1-Gln 510) was fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Asp 21
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q6UX06
Molecular Weight:	56.6 kDa (predicted); 65-70 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 92 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

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

Olfactomedin-4, also known as G-CSF-stimulated clone 1 protein, Antiapoptotic protein GW112, and OLFM4, is a secreted protein that contains one olfactomedin-like domain. The OLFM4 gene was recently reported to inhibit various apoptotic pathways and promote the proliferation of cancer cells, suggesting that OLFM4 might serve as a diagnostic marker for human cancers. Thus, OLFM4 mRNA might be a useful tool to support the diagnosis of cancer, irrespective of the clinical stages. It is overexpressed in some human tumor types, especially in those of

the digestive system. GW112 is associated with GRIM-19, a protein known to be involved in regulating cellular apoptosis. Functionally, GW112 could significantly attenuate the ability of GRIM19 to mediate retinoic acid-IFN-beta-mediated cellular apoptosis and apoptosis-related gene expression. Also, GW112 demonstrated strong antiapoptotic effects in tumor cells treated with other stress exposures such as hydrogen peroxide. Finally, forced overexpression of GW112 in murine prostate tumor cells led to more rapid tumor formation in a syngeneic host. OLFM4 is an important regulator of cell death that plays important roles in tumor cell survival and tumor growth. As a candidate gene for cancer-specific expression. The serum olfactomedin 4 (OLFM4) is a useful marker for Gastric cancer (GC) and its measurement alone or in combination with Reg IV has utility in the early detection of GC. GW112 has an antiapoptotic property against the cytotoxic agents-induced apoptosis. It suggested that GW112 could be an important mediator in NF kappaB-dependent tumorigenesis of digestive tract tissues.

Reference

Zhang X,et al.(2004) GW112, a novel antiapoptotic protein that promotes tumor growth. Cancer Res. 64(7): 2474-81.

Koshida S,et al.(2007) Specific overexpression of OLFM4(GW112/HGC-1) mRNA in colon, breast and lung cancer tissues detected using quantitative analysis. Cancer Sci. 98(3): 315-20.

Oue N,et al.(2009) Serum olfactomedin 4 (GW112, hGC-1) in combination with Reg IV is a highly sensitive biomarker for gastric cancer patients. Int J Cancer. 125(10): 2383-92.

Kim KK,et al.(2010) Up regulation of GW112 Gene by NF kappaB promotes an antiapoptotic property in gastric cancer cells. Mol Carcinog. 49(3): 259-70.

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