Data Sheet (Cat.No.TMPY-06929)

TargetMol

FOLR1 Protein, Human, Recombinant (His & Avi), Biotinylated

General Information

Synonyms:	Folate Binding Protein;folate receptor 1 (adult);FOLR;FBP
Protein Construction:	Arg25-Met233
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P15328
Molecular Weight:	27.5 kDa (predicted). Due to glycosylation, the protein migrates to 40-50 kDa based on Bis-Tris PAGE result.

QC Testing

Biological Activity:	1. Immobilized TMPY-06929 at 0.5μg/ml (100μl/Well) on streptavidin (5μg/ml) precoated plate. Dose response curve for Anti-FOLR1 Antibody, hFc Tag with the EC50 of 4.3ng/ml determined by ELISA. (QC Test) 2. Loaded Anti-FOLR1 Ab., hFc-Avi Tag on ProA-Biosensor can bind TMPY-06929 with an affinity constant of 0.42 nM as determined in BLI assay.
Purity:	≥ 95 % as determined by SDS-PAGE. ≥ 95 % as determined by SEC-HPLC.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from 0.22μm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.

Preparation and Storage

Reconstitution:

Dissolve the lyophilized protein in distilled water. Please refer to the Certificate of Analysis for detailed instructions.

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

The protein encoded by FOLR1 gene is a member of the folate receptor family. Members of this gene family bind folic acid and its reduced derivatives, and transport 5-methyltetrahydrofolate into cells. This gene product is a secreted protein that either anchors to membranes via a glycosyl-phosphatidylinositol linkage or exists in a

soluble form. Mutations in this gene have been associated with neurodegeneration due to cerebral folate transport deficiency. Due to the presence of two promoters, multiple transcription start sites, and alternative splicing, multiple transcript variants encoding the same protein have been found for this gene.Folate receptor α (FRα) is the most important subunit of Folate receptor and the alpha isoform has been shown to be selectively overexpressed in cancer types like breast and ovarian cancer compared to normal breast and ovarian epithelial cells. It was determined that Folate receptor α exhibits a limited expression on the apical surfaces of the epithelial cells of normal lung, breast, thyroid, parathyroid, and kidney tissues. For their uptake of folate, normal cells rely almost exclusively on the reduced folate carrier, whereas many carcinomas and myeloid leukemia cells overexpress a high-affinity FR on their surfaces, perhaps reflecting their increased need for folate to support rapid cell division.Cancer ImmunotherapyImmune CheckpointImmunotherapyTargeted Therapy

Reference

Senol S, Ceyran AB, Aydin A,et al.Folate receptor α expression and significance in endometrioid endometrium carcinoma and endometrial hyperplasia. International Journal of Clinical and Experimental Pathology. 2015;8(5): 5633-5641.