



# Recombinant Protein Technical Manual

## Recombinant Rat FOLR1 Protein (Fc Tag)

RPES3160

### Product Data:

**Product SKU:** RPES3160

**Size:** 50µg

**Species:** Rat

**Expression host:** HEK293 Cells

**Uniprot:** NP\_598211.1

### Protein Information:

**Molecular Mass:** 50.9 kDa

**AP Molecular Mass:**

**Tag:** C-Fc

**Bio-activity:**

**Purity:** > 85 % as determined by SDS-PAGE

**Endotoxin:** < 1.0 EU per µg protein as determined by the LAL method.

**Storage:** Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from sterile PBS, pH 7.4

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:**

**Synonyms:** FOLR1

## Immunogen Information:

**Sequence:** Met1-Met231

## 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  $\alpha$  (FR $\alpha$ ) 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  $\alpha$  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