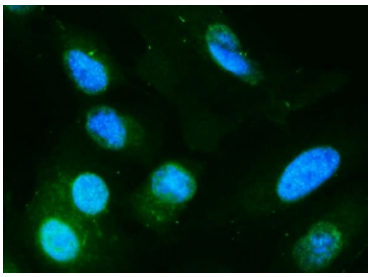
DIO1 Antibody (RQ5971)

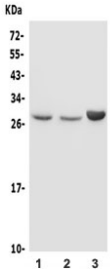
Catalog No.	Formulation	Size
RQ5971	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

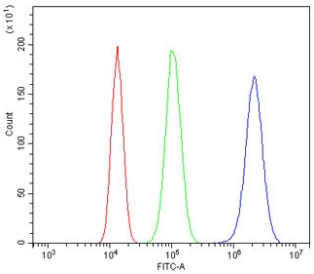
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose and 0.025% sodium azide
UniProt	P49895
Localization	Cytoplasmic
Applications	Western Blot : 0.5-1ug/ml Flow Cytometry : 1-3ug/million cells Immunofluorescence : 2-4ug/ml Direct ELISA : 0.1-0.5ug/ml
Limitations	This DIO1 antibody is available for research use only.



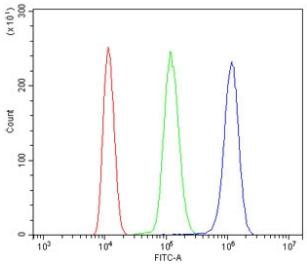
Immunofluorescent staining of FFPE human A549 cells with DIO1 antibody (green) and DAPI nuclear stain (blue). HIER: steam section in pH6 citrate buffer for 20 min.



Western blot testing of 1) rat liver, 2) rat kidney and 3) human A549 lysate with DIO1 antibody. Predicted molecular weight ~29 kDa.



Flow cytometry testing of human 293T cells with DIO1 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= DIO1 antibody.



Flow cytometry testing of mouse ANA-1 cells with DIO1 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= DIO1 antibody.

Description

Type I iodothyronine deiodinase is a protein that in humans is encoded by the DIO1 gene. It is mapped to 1p32.3. The protein encoded by this gene belongs to the iodothyronine deiodinase family. It catalyzes the activation, as well as the inactivation of thyroid hormone by outer and inner ring deiodination, respectively. The activation reaction involves the conversion of the prohormone thyroxine (3,5,3',5'-tetraiodothyronine, T4), secreted by the thyroid gland, to the bioactive thyroid hormone (3,5,3'-triiodothyronine, T3) by 5'-deiodination. This protein provides most of the circulating T3, which is essential for growth, differentiation and basal metabolism in vertebrates. This protein is a selenoprotein, containing the rare amino acid selenocysteine (Sec) at its active site. Sec is encoded by the UGA codon, which normally signals translation termination. The 3' UTRs of selenoprotein mRNAs contain a conserved stem-loop structure, designated the Sec insertion sequence (SECIS) element, that is necessary for the recognition of UGA as a Sec codon, rather than as a stop signal. Alternatively spliced transcript variants have been found for this gene.

Application Notes

Optimal dilution of the DIO1 antibody should be determined by the researcher.

Immunogen

Recombinant human protein (amino acids K137-S249) was used as the immunogen for the DIO1 antibody.

Storage

After reconstitution, the DIO1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.