

RP2 Protein, Human, Recombinant (GST)

General Information

Synonyms:	DELXp11.3;RP2;NME10;KIAA0215;NM23-H10;TBCCD2;retinitis pigmentosa 2 (X-linked recessive);XRP2
Protein Construction:	A DNA sequence encoding the human XRP2 (NP_008846.2) (Met 1-Thr 350) was fused with the GST tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	O75695
Molecular Weight:	66 kDa (predicted); 66 kDa (reducing conditions)

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:	> 90 % 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 50 mM Tris, 100 mM NaCl, 1 mM GSH 0.5 mM EDTA, 0.5 mM PMSF pH 8.0. 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

XRP2, also known as Protein XRP2 and RP2, is a member of the TBCC (tubulin cofactor C) family and contains one C-CAP/cofactor C-like domain. This protein is encoded by the RP2 gene in humans. XRP2 stimulates the GTPase activity of tubulin, but does not enhance tubulin heterodimerization. XRP2 acts as guanine nucleotide dissociation

inhibitor for ARL3. Defects in RP2 gene are the cause of retinitis pigmentosa type 2 (RP2), also known as X-linked retinitis pigmentosa 2 (XLRP-2). It leads to degeneration of retinal photoreceptor cells. Patients typically have night vision blindness and loss of midperipheral visual field. As their condition progresses, they lose their far peripheral visual field and eventually central vision as well.

Reference

Schwahn U., et al., (1998), Positional cloning of the gene for X-linked retinitis pigmentosa 2. Nat. Genet. 19:327-332.

Ross M.T., et al., (2005), The DNA sequence of the human X chromosome. Nature 434:325-337.

Vaca Jacome A.S., et al., (2015), N-terminome analysis of the human mitochondrial proteome. Proteomics 15:2519-2524.

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