Data Sheet (Cat.No.TMPC-00055)

TargetMol

ATR Protein, Human, Recombinant (GST)

General Information

Protein Construction: Recombinant human ATR (2245-end) was expressed by baculovirus in Sf9 insect cells using an N-terminal GST tag.

Species: Human

Expression Host: Baculovirus-Insect Cells

Accession: Q13535

Molecular Weight: ~70 kDa

QC Testing

Biological Activity: Activity has not been tested. It is theoretically active, but we cannot guarantee it.

Purity: >70% as determined by SDS-PAGE.

Formulation: Supplied as sterile 50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 10 mM glutathione, 0.1 mM EDTA, 0.25 mM DTT, 0.1 mM PMSF, 25% glycerol.

Preparation and Storage

Stability & Storage:

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:

Enzymes are highly recommended to be shipped at frozen temperature with dry ice. Shipment made at ambient temperature may seriously affect the activity of the ordered products.

Protein Background

ATR is a serine/threonine protein kinase and ATR kinase inhibitors potentiate chemotherapy and radiation. The ATR kinase inhibitor VX-970 (NSC 780162) is in clinical development in combination with primary cytotoxic agents and as a monotherapy for tumors harboring specific mutations. Nucleotide excision repair (NER) is the sole mechanism of UV-induced DNA lesion repair in mammals. A single round of NER requires multiple components including seven core NER factors, xeroderma pigmentosum A-G (XPA-XPG), and many auxiliary effector proteins including ATR serine/threonine kinase. The ataxia telangiectasia mutated serine/threonine kinase (ATM) /checkpoint kinase 2 (CHEK2, best known as CHK2) and the ATM and Rad3-related serine/threonine kinase (ATR) /CHEK1 (best known as CHK1) cascades are the 2 major signaling pathways driving the DNA damage response (DDR), a network of processes crucial for the preservation of genomic stability that act as a barrier against tumorigenesis and tumor progression.

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