

DDR2 (Human), Active

Recombinant protein expressed in Sf9 cells

Cat# CY-SPD06

Lot No. B023-1
5 µg 0.1 µg/µl

Background:

DDR2 is a member of a novel subclass of RTKs containing a distinct extracellular region encompassing a factor VIII-like domain (1) and is thought to be involved in the regulation of cell growth, differentiation, and metabolism. DDR2 plays a role in the regulation of collagen turnover mediated by smooth muscle cells in obstructive diseases of blood vessels and the lung (2).

Product Description:

Recombinant human DDR2 (467-end) was expressed by baculovirus in Sf9 insect cells using a N-terminal GST tag. The gene accession number is NM_006182.

Gene Aliases:

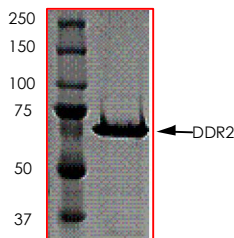
TKT; NTRKR3; TYRO10

Formulation:

Recombinant protein stored in 50mM Tris-HCl, pH 7.5, 150mM NaCl, 0.25mM DTT, 0.1mM EGTA, 0.1mM EDTA, 0.1mM PMSF, 25% glycerol.

Purity & Molecular Weight:

The purity was determined to be >90% by densitometry. Approx. MW 70kDa.



Storage:

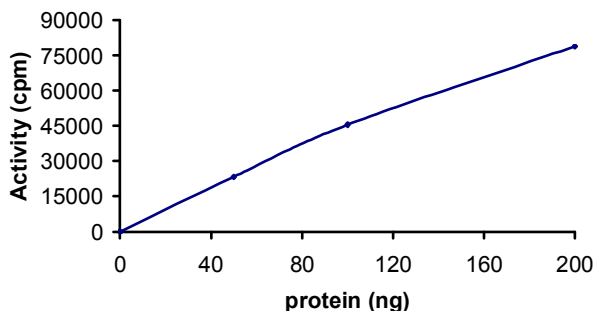
Store product at -70°C . For optimal storage, aliquot target into smaller quantities after centrifugation and store at recommended temperature. For most favorable performance, avoid repeated handling and multiple freeze/thaw cycles.

Stability:

Unopened vial at -70°C , 1 year from date of shipment.

**Specific Activity:**

The specific activity was determined to be 25 nmol/min/mg as per Activity Assay Protocol.

**Activity Assay Protocol:**

Assay activity of the kinase in a 25 μ L reaction consisting of 5 μ L of 5 X Kinase Assay Buffer, 10 μ L of 1 mg/ml the Substrate Solution, 5 μ L of diluted kinase and 5 μ L of 250 μ M ATP solution containing [γ 32 P] ATP (0.167 μ Ci/ μ L). Start the reaction by adding the ATP solution. Incubate for 15 minutes at 30°C. Terminate the reaction by spotting 20 μ L of the reaction mixture onto phosphocellulose P81 paper. Air-dry the P81 paper and sequentially wash 4 times for approximately 10 minutes each in 1% phosphoric acid with constant gentle stirring. Count the P81 paper in a liquid scintillation counter.

Substrate Solution:

Axltide synthetic peptide substrate (KKSRRGDYMTMQIG) diluted in distilled H₂O to a final concentration of 1 mg/ml.

5 X Kinase Assay Buffer:

25mM MOPS, 12.5mM β -glycerol-phosphate, 20mM MgCl₂, 25mM MnCl₂, 5mM EGTA, 2mM EDTA. Add 0.25mM DTT to Kinase Assay Buffer prior to use.

References:

- 1.Karn, T. et al: Structure, expression and chromosomal mapping of TKT from man and mouse: a new subclass of receptor tyrosine kinases with a factor VIII-like domain. *Oncogene* 8: 3433-3440, 1993.
- 2.Ferri, N. et al: Role of discoidin domain receptors 1 and 2 in human smooth muscle cell-mediated collagen remodeling: potential implications in atherosclerosis and lymphangiogliomyomatosis. *Am J Pathol.* 2004 May;164(5):1575-85.

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