

Growth Arrest And DNA Damage Inducible Protein Alpha Active Protein | GADD45a active protein

Active Growth Arrest And DNA Damage Inducible Protein Alpha (GADD45a)

CATALOG # AAA150146	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

Growth Arrest And DNA Damage Inducible Protein Alpha; Active Growth Arrest And DNA Damage Inducible Protein Alpha (GADD45a); DDIT1; GADD45; DNA damage-inducible transcript 1 protein; GADD45a active protein

PRODUCT SPECIFICATIONS

Purity/Purification	>95%
Form/Format	Freeze-dried powder 20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.
Sequence Positions	Met1~Arg165
Sequence Length	165
Applicable Applications for GADD45a active protein	Activity Assay, Cell Culture
Species	Rat
Tag	N-terminal His Tag
Subcellular Location	Nucleus
Isoelectric Point	4.5
Reconstitution	Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
Preparation and Storage	Store at 2-8 degree C for one month. Aliquot and store at -80 degree C for 12 months. Avoid repeated freeze/thaw cycles. Stability: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37 degree C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

IMAGES



Bioactivity

Growth arrest and DNA-damage-inducible protein GADD45 alpha (GADD45a) is a member of the GADD45 family. It may affect PCNA interaction with some CDK (cell division protein kinase) complexes; stimulates DNA excision repair in vitro and inhibits entry of cells into S phase. In T-cells, functions as a regulator of p38 MAPKs by inhibiting p38 phosphorylation and activity. Besides, Proliferating Cell Nuclear Antigen (PCNA) has been identified as an interactor of GADD45a, thus a binding ELISA assay was conducted to detect the interaction of recombinant rat GADD45a and recombinant rat PCNA. Briefly, GADD45a were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100L were then transferred to PCNA-coated microtiter wells and incubated for 2h at 37. Wells were washed with PBST and incubated for 1h with anti-GADD45a pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37. Finally, add 50uL stop solution to the wells and read at 450nm immediately. The binding activity of GADD45a and PCNA was shown in Figure 1, and this effect was in a dose dependent manner. Figure. The binding activity of GADD45a with PCNA.



SDS-PAGE

Figure. SDS-PAGE



WB (Western Blot)

Figure. Western Blot

ADDITIONAL INFORMATION

Product Categories/Family for GADD45a active protein	Signal transduction
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NCBI AND UNIPROT INFORMATION

NCBI GI #	1346077
NCBI GeneID	25112
UniProt Accession #	P48317
Molecular Weight	Predicted Molecular Mass: 22.2kDa Accurate Molecular Mass: 22kDa
NCBI Official Full Name	Growth arrest and DNA damage-inducible protein GADD45 alpha
NCBI Official Synonym Full Names	growth arrest and DNA-damage-inducible, alpha
NCBI Official Symbol	Gadd45a
NCBI Official Synonym Symbols	Ddit1; Gadd45
NCBI Protein Information	growth arrest and DNA damage-inducible protein GADD45 alpha
UniProt Protein Name	Growth arrest and DNA damage-inducible protein GADD45 alpha
UniProt Gene Name	Gadd45a
UniProt Synonym Gene Names	Ddit1; Gadd45; DDIT-1
UniProt Entry Name	GA45A_RAT

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

