

Human AIM2 Protein (GST Tag)

Catalog Number: 11654-H09B



Sino Biological Inc.

Biological Solution Specialist

General Information

Gene Name Synonym:

AIM2, RP11-520H16.3, PYHIN4

Protein Construction:

A DNA sequence encoding the human AIM2 (NP_004824.1) (Met 1-Thr 343) was fused with the GST tag at the N-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio-Activity

Measured by its ability to inhibit the proliferation of MCF7 human breast adenocarcinoma cells (Karey, K.P. et al. (1988) Cancer Research 48:4083.). The ED50 for this effect is typically 4-7 µg/ml.

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Met

Molecular Mass:

The recombinant human AIM2/GST chimera consists of 567 amino acids and predicts a molecular mass of 65.2 kDa as estimated in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 50mM Tris, 1M NaCl, 0.5mM PMSF, 5mM GSH, pH 8.0

Normally 5 % - 8 % trehalose and mannitol are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

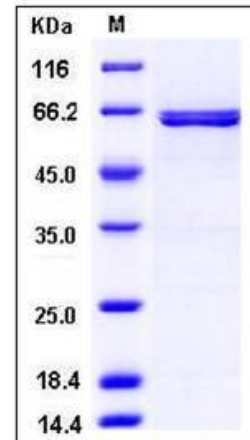
Usage Guide

Storage:

Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

SDS-PAGE:



Reconstitution:

Detailed reconstitution instructions are sent along with the products.

Protein Description

Interferon-inducible protein AIM2, also known as Absent in melanoma 2 and AIM2, is a nucleus protein which belongs to the HIN-200 family. AIM2 is a tumor suppressor which may act by repressing NF-kappa-B transcriptional activity. It contains one DAPI domain and one HIN-200 domain. AIM2 is expressed in spleen, small intestine, peripheral blood leukocytes, and testis. AIM2 plays a role in tumorigenic reversion and may control cell proliferation. Interferon-gamma induces expression of AIM2. The C-terminal HIN domain of AIM2 binds double stranded DNA (either viral, bacterial, or even host) and acts as a cytosolic dsDNA sensor. This leads to the oligomerization of the inflammasome complex. The N-terminal pyrin domain of AIM2 interacts with the pyrin domain of another protein ASC (or Apoptosis-associated Speck-like protein containing a caspase activation and recruitment domain). ASC also contains a CARD domain (caspase recruitment domain), that recruits procaspase-1 to the complex. This leads to the autoactivation of caspase-1, an enzyme that processes proinflammatory cytokines (IL-1b and IL-18). Defects in AIM2 may be a cause of microsatellite unstable colon cancers.

References

1. DeYoung KL, et al., 1997, Oncogene 15 (4): 453-7.
2. Burckstummer, et al., 2009, Nat Immunol. 10 (3):266-72.
3. Fernandes-Alnemri, T. et al., 2010, Nat Immunol. 11 (5):385-93.
4. Schroder K, et al., 2010, Cell 140 (6): 821-32.

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