Product Datasheet

Gasdermin-D Protein, Mouse, Recombinant (His & Myc) (orb1977249)

Description	Precursor of a pore-forming protein that plays a key role in host defense against pathogen infection and danger signals. This form constitutes the precursor of the pore-forming protein: upon cleavage, the released N-terminal moiety (Gasdermin-D, N-terminal) binds to membranes and forms pores, triggering pyroptosis.; Promotes pyroptosis in response to microbial infection and danger signals. Produced by the cleavage of gasdermin-D by inflammatory caspases CASP1 or CASP4/CASP11 in response to canonical, as well as non-canonical (such as cytosolic LPS) inflammasome activators. After cleavage, moves to the plasma membrane where it strongly binds to inner leaflet lipids, including monophosphorylated phosphatidylinositols, such as phosphatidylinositol 4-phosphate, bisphosphorylated phosphatidylinositols, such as phosphatidylinositol (4,5)-bisphosphate, as well as phosphatidylinositol (3,4,5)-bisphosphate, and more weakly to phosphatidic acid and phosphatidylserine. Homooligomerizes within the membrane and forms pores of 10-15 nanometers (nm) of inner diameter, allowing the release of mature IL1B and triggering pyroptosis. Exhibits bactericidal activity. Gasdermin-D, N-terminal released from pyroptotic cells into the extracellular milieu rapidly binds to and kills both Gram-negative and Gram-positive bacteria, without harming neighboring mammalian cells, as it does not disrupt the plasma membrane from the outside due to lipid-binding specificity. Under cell culture conditions, also active against intracellular bacteria, such as Listeria monocytogenes. Also active in response to MAP3K7/TAK1 inactivation by Yersinia toxin YopJ, which triggers cleavage by CASP8 and subsequent activation. Strongly binds to bacterial and mitochondrial lipids, including cardiolipin. Does not bind to unphosphorylated phosphatidylinositol, phosphatidylethanolamine nor phosphatidylcholine.
Storage	-20°C
Tag	N-10xHis, C-Myc
Note	For research use only

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Application notes	Reconstitute the lyophilized protein in sterile deionized water. The product concentration should not be less than 100 µg/mL. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.
Protein Sequence	GIDEEELIEAADFQGLYAEVKACSSELESLEMELRQQILVNIGKILQDQPSMEALEASLGQGL CSGGQVEPLDGPAGCILECLVLDSGELVPELAAPIFYLLGALAVLSETQQQLLAKALETTVLS KQLELVKHVLEQSTPWQEQSSVSLPTVLLGDCWDEKNPTWVLLEECGLRLQVESPQVHW EPTSLIPTSALYASLFLLSSLGQKPC
Purity	94.00%
MW	30.4 kDa (predicted)
Uniprot ID	**Q9D8T2**
Expiration Date	6 months from date of receipt.

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