Datasheet for ABIN2669644

BRD3 Protein (AA 24-144) (His tag,DYKDDDDK Tag)

2 Images

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Overview

Quantity:	100 µg
Target:	BRD3
Protein Characteristics:	AA 24-144
Origin:	Human
Source:	Escherichia coli (E. coli)
Protein Type:	Recombinant
Purification tag / Conjugate:	This BRD3 protein is labelled with His tag,DYKDDDDK Tag.

Product Details

Characteristics:	The peptide corresponding to amino acids 24 - 144 that contains the bromodomain sequences of BRD3 (accession number NM_007371.3) was expressed in E. coli and contains an N-terminal His tag and C-terminal FLAG tag with an observed molecular weight of 20.5 kDa. It shows binding specificity for acetylated H3K18, H4K12, H4K20 and H4K12/K16/K20.

Target Details

Target:	BRD3
Alternative Name:	BRD3 (BRD3 Products)
Background:	Bromodomain-containing protein 3 (BRD3), also known as RING3L, belongs to the BET subclass of proteins, which are characterized by two N-terminal bromodomains and one ET (Extra Terminal) domain. BRDs associate with chromatin through their bromodomains that recognize acetylated histone lysine residues. Bromodomains function as 'readers' of these epigenetic histone marks and regulate chromatin structure and gene expression by linking

Target Details

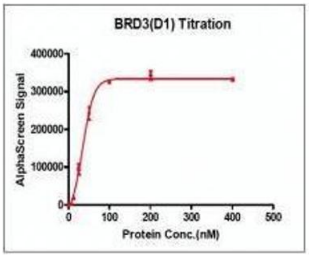
	associated proteins to the acetylated nucleosomal targets. The ET domain functions as a protein binding motif and exerts atypical serine-kinase activity. The BET family consists of at least four members in mouse and human, BRD2 (also referred to as FSRG1, RING3), BRD3 (FSRG2, ORFX), BRD4 (FSRG4, MCAP/HUNK1), and BRDT (FSRG3, BRD6). BRD3 binds and regulates GATA1 in an acetylation-dependent manner. GATA1 is a key regulator of gene expression for erythroid and megakaryocyte-specific genes, and mutations in GATA1 have been associated with congenital anemias and megakaryoblastic leukemias. Interestingly, tight interaction of BRD3 with GATA1 requires multiple acetylation modifications, and structural data showed that two adjacent acetylation sites in GATA1 interact with a single bromodomain. BRD3 protein expression is induced in activated lymphocytes. Additionally, it is highly expressed in undifferentiated ES cells and expression is observed to drop upon endothelial differentiation. Altered expression levels of BRD3 have been observed in certain cancers, such as nasopharyngeal carcinomas and bladder cancer. BRD3 also interacts with LANA-1, the Kaposi's sarcoma-associated herpesvirus (KSHV) latency-associated nuclear antigen 1, which is required for the replication of episomal viral genomes.
Molecular Weight:	20.5 kDa
Pathways:	Chromatin Binding

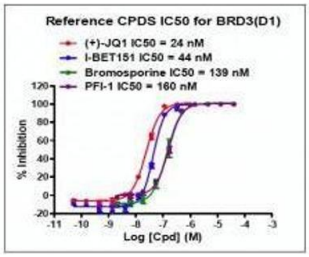
Application Details

Restrictions:	For Research Use only

Handling

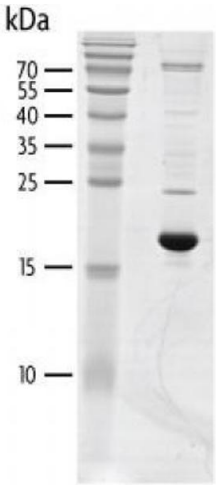
Handling Advice:	Avoid repeated freeze/thaw cycles and keep on ice when not in storage.
Storage:	-80 °C
Storage Comment:	Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation.





Screening Assay

Image 1. Recombinant BRD3 (24-144) activity using AlphaScreen. BRD3 (24-144) titration and inhibition were assessed using an AlphaScreen® assay. Titration curves were generated to show signal response in the presence of modified peptide substrate at increasing protein concentrations. An IC50 dose response assessment of reference compounds JQ1, I-BET151, Bromosporine and PFI-1 is also shown. This data was generated and kindly provided courtesy of ChemPartner.



Western Blotting

Image 2. Recombinant BRD3 (24-144) protein gel. BRD3 (24-144) protein was run on a 10% SDS-PAGE gel and stained with Coomassie blue.