PRODUCT INFORMATION

BRD2 bromodomain 1 and 2 (human, recombinant)

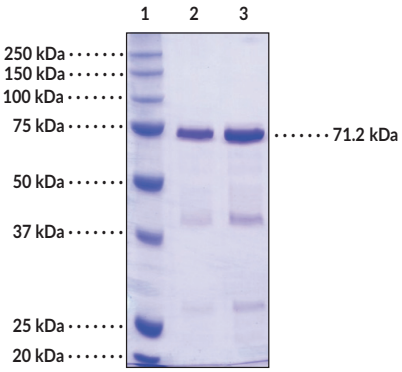
Item No. 11069

Overview and Properties

Synonyms:	Bromodomain containing protein 2, RING3, RNF3
Source:	Recombinant N-terminal GST-tagged protein expressed in *E. coli*
Amino Acids:	65-459
Uniprot No.:	P25440
Molecular Weight:	71.2 kDa
Storage:	-80°C (as supplied)
Stability:	≥2 years
Purity:	***batch specific*** (≥65% estimated by SDS-PAGE)
Supplied in:	50 mM Tris, pH 7.5, with 500 mM sodium chloride, 5% glycerol, and 5 mM β-mercaptoethanol
Protein Concentration:	***batch specific*** mg/ml

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Image



Lane 1: MW Markers
Lane 2: BRD2 Domains 1 and 2 (2 µg)
Lane 3: BRD2 Domains 1 and 2 (4 µg)

Representative gel image shown; actual purity may vary between each batch.

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Description

Bromodomain-containing 2 (BRD2) is a transcriptional regulator that is a member of the bromodomain and extra-terminal (BET) family.[1] It is ubiquitously expressed and localizes to the nucleus. BRD2 is composed of two N-terminal bromodomains (BD1 and BD2) that bind acetylated lysine on histones, serving to couple histone acetylation marks to the transcriptional regulation of target promoters, and an extra-terminal domain that mediates chromatin interactions.[1,2] BRD2 associates with transcription effector and regulator proteins, including RNA polymerase II, histone acetylases and deacetylases, and transcriptional co-activators and co-repressors to form a transcription complex that regulates the expression of genes involved in inflammation and cell proliferation.[1,3] BRD2 also binds to the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) envelope (E) protein, a transmembrane protein involved in CoV virion assembly and pathogenesis of the related virus, SARS-CoV.[4-6] siRNA knockdown of *Brd2* reduces LPS-induced production of TNF and IL-6 in mouse bone marrow-derived macrophages (BMDMs).[7] Genetic deletion of *Brd2* in mice induces neural tube defects and is embryonic lethal.[1] *Brd2*$^{+/-}$ mice have decreased numbers of GABAergic neurons and a reduced flurothyl-induced seizure threshold. SNPs in *BRD2* have been found in individuals with juvenile myoclonic epilepsy. Cayman's BRD2 bromodomains 1 and 2 (human, recombinant) protein can be used for Western blot (WB) applications.

References

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4. Gordon, D.E., Jang, G.M., Bouhaddou, M. *et al.* A SARS-CoV-2-human protein-protein interaction map reveals drug targets and potential drug-repurposing. *BioRxiv* (2020).
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