PRODUCT INFORMATION

BRD2 bromodomain 2 (human, recombinant)

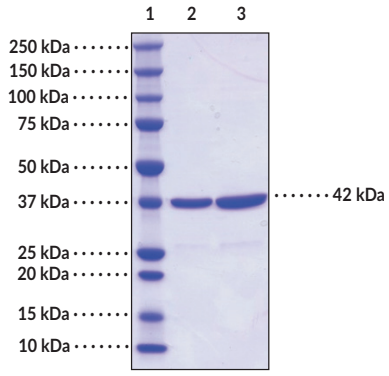
Item No. 11070

Overview and Properties

Synonyms:	Bromodomain containing protein 2, RING3, RNF3
Source:	Recombinant N-terminal GST-tagged protein expressed in *E. coli*
Amino Acids:	339-459
Uniprot No.:	P25440
Molecular Weight:	42 kDa
Storage:	-80°C (as supplied)
Stability:	≥2 years
Purity:	***batch specific*** (≥95% 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 Domain 2 (2 µg)
Lane 3: BRD2 Domain 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] The BD2 bromodomain of BRD2 contains four α-helices that form the binding site for the acetylated histone H4 tail.[7] Point mutations of valine 329 (V329A) or asparagine (N382A) in the BD2 bromodomain eliminate BRD2 binding to acetylated histone H4 lysine 12 (H4K12Ac), and a point mutation of tyrosine 427 (Y427F) abolishes the association between BRD2 and STAT3.[8,9] Cayman's BRD2 bromodomain 2 (human, recombinant) protein can be used for ELISA, Western blot (WB), and binding assay applications.

References

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