

PRODUCT INFORMATION



BRD3 bromodomain 2 (human, recombinant)

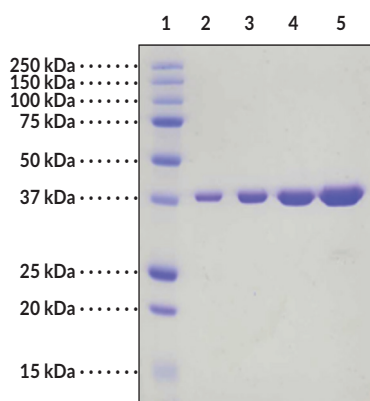
Item No. 14658

Overview and Properties

Synonyms: Bromodomain containing protein 3, ORFX, RING3L
Source: Recombinant human N-terminal GST-tagged BRD3 bromodomain 2 expressed in *E. coli*
Amino Acids: 306-416
Uniprot No.: Q15059
Molecular Weight: 40.7 kDa
Storage: -80°C (as supplied)
Stability: ≥2 years
Purity: ≥95% estimated by SDS-PAGE
Supplied in: 50 mM Tris, pH 7.5, containing 150 mM sodium chloride and 20% glycerol
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: BRD3 bromodomain 2 (1 µg)
Lane 3: BRD3 bromodomain 2 (2 µg)
Lane 4: BRD3 bromodomain 2 (5 µg)
Lane 5: BRD3 bromodomain 2 (10 µg)

SDS-PAGE Analysis of BRD3 bromodomain 2.

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

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
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Description

Bromodomain-containing protein 3 (BRD3) is a member of the bromodomain and extra-terminal domain (BET) family.¹ It 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. BRD3 is ubiquitously expressed and localizes to the nucleus where it preferentially binds acetylated histone H4 lysine 5 (H4K5), H4K12, and H4K14 at active transcription sites.^{2,3} Knockdown of *Brd3* enhances differentiation of C2C12 skeletal muscle myoblasts.⁴ Chromosomal translocations leading to the fusion of BRD3 with the nuclear protein in testis (NUT) gene and resulting in expression of BRD3-NUT fusion proteins are associated with NUT midline carcinoma (NMC).⁵ Cayman's BRD3 bromodomain 2 protein can be used for Western blot (WB).

References

1. Weidner-Glunde, M., Ottinger, M., and Schulz, T.F. WHAT do viruses BET on? *Front. Biosci. (Landmark Ed.)* **15**, 537-549 (2010).
2. Thorpe, K.L., Gorman, P., Thomas, C., *et al.* Chromosomal localization, gene structure and transcription pattern of the ORFX gene, a homologue of the MHC-linked RING3 gene. *Gene* **200(1-2)**, 177-183 (1997).
3. LeRoy, G., Rickards, B., and Flint, S.J. The double bromodomain proteins Brd2 and Brd3 couple histone acetylation to transcription. *Mol. Cell* **30(1)**, 51-60 (2008).
4. Roberts, T.C., Etxaniz, U., Dall'Agnese, A., *et al.* BRD3 and BRD4 BET bromodomain proteins differentially regulate skeletal myogenesis. *Sci. Rep.* **7(1)**, 6153 (2017).
5. French, C.A., Ramirez, C.L., Kolmakova, J., *et al.* BRD-NUT oncoproteins: A family of closely related nuclear proteins that block epithelial differentiation and maintain the growth of carcinoma cells. *Oncogene* **327(15)**, 2237-2242 (2008).

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