

# PRODUCT INFORMATION



## BRD4 bromodomains 1 and 2 (human recombinant; aa 49-460)

Item No. 11052

### Overview and Properties

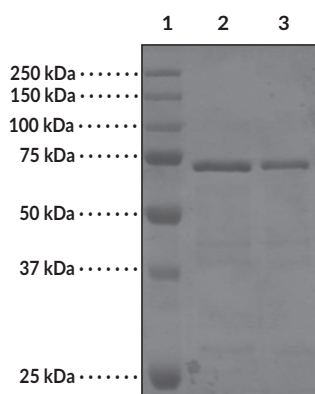
**Synonyms:** Bromodomain containing protein 4, HUNK1, MCAP  
**Source:** Recombinant GST-tagged protein expressed in *E. coli*  
**Amino Acids:** 49-460  
**Molecular Weight:** 73.4 kDa  
**Storage:** -80°C (as supplied)  
**Stability:** ≥1 year  
**Purity:** **batch specific** (≥70% estimated by SDS-PAGE)  
**Supplied in:** 50 mM Tris, pH 7.5, containing 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: BRD4 Domain 1 and 2 (5.0 μg)

Lane 3: BRD4 Domain 1 and 2 (2.5 μg)

*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  
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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## Description

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The acetylation of histone lysine residues plays a crucial role in the epigenetic regulation of gene transcription. Acetylated lysine residues are recognized by a small protein domain known as a bromodomain.<sup>1</sup> These domains function in the linking of protein complexes to acetylated nucleosomes, thereby controlling chromatin structure and gene expression. The BET family of proteins, defined by tandem Bromodomains and an Extra Terminal domain, include BRD2, BRD3, BRD4, and BRDT.<sup>2</sup> The BET proteins play a key role in many cellular processes, including inflammatory gene expression, mitosis, and viral/host interactions.<sup>3-5</sup> The isolated individual or tandem bromodomains of BRD2 and BRD4 have been shown to bind acetylated histone tails, serving to couple histone acetylation marks to the transcriptional regulation of target promoters.<sup>4,6-9</sup> Small molecule inhibitors of these interactions hold promise as useful therapeutics for human disease.<sup>10-12</sup>

## References

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1. Mujtaba, S., Zeng, L., and Zhou, M.-M. *Oncogene* **26**, 5521-5527 (2011).
2. Florence, B. and Faller, D.V. *Front. Biosci.* **6**, D1008-D1018 (2011).
3. Hargreaves, D.C., Horng, T., and Medzhitov, R. *Cell* **138(1)**, 129-45 (2009).
4. LeRoy, G., Rickards, B., and Flint, S.J. *Mol. Cell* **30(1)**, 51-60 (2008).
5. Weidner-Glunde, M., Ottinger, M., and Schulz, T.F. *Front. Biosci.* **15**, 537-549 (2010).
6. Liu, Y., Wang, X., Zhang, J., et al. *Biochem.* **47**, 6403-6417 (2008).
7. Day, A., Chitsaz, F., Abbasi, A., et al. *Proc. Natl. Acad. Sci. USA* **100(15)**, 8758-8763 (2003).
8. Umehara, T., Nakamura, Y., Wakamori, M., et al. *FEBS Lett.* **584(18)**, 3901-3908 (2010).
9. Umehara, T., Nakamura, Y., Jang, M.K., et al. *J. Biol. Chem.* **285(10)**, 7610-7618 (2010).
10. Filippakopoulos, P., Qi, J., Picaud, S., et al. *Nature* **468(7327)**, 1067-73 (2011).
11. Hewings, D.S., Wang, M., Philpott, M., et al. *J. Med. Chem.* **1-30** (2011).
12. Chung, C.W., Coste, H., White, J.H., et al. *J. Med. Chem.* **54(11)**, 3827-3838 (2011).

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