

## BRD1 (561-668aa), His, Human

**Cat. No.:** Z03184-100

**Size:** 100.0 ug

**Synonyms:** BRL, Bromodomain containing 1, BRPF2

### Description:

Bromodomain (BRD) is an extensive family of protein domains, originally identified in and named after the *Drosophila* protein Brahma. Members of BRD family share a conserved atypical left-handed four helix bundle structure, and specifically bind to  $\epsilon$ -lysine acetylated proteins. It is well known that histone acetylation and methylation play a central role in epigenetics and are important for various gene transcription events, thus the acetyl-lysine binding property of BRDs make them suitable drug targets for epigenetics. Currently, there are 46 diverse human proteins containing 61 BRDs. These include histone acetyltransferases, ATP-dependent chromatin-remodeling complex proteins, and nuclear scaffold proteins. The main functions of BRDs *in vivo* include chromatin acetylation and deacetylation, nucleosome assembly and remodeling, and organizations of chromosome or chromatin domains. Recombinant human BRD1 (561-668) with His tag produced in *E. coli* is a single, non-glycosylated polypeptide chain containing 115 amino acids. A fully biologically active molecule, BRD1 (561-668) has a molecular mass of 13.7 kDa analyzed by reducing SDS-PAGE and is obtained by proprietary chromatographic techniques at GenScript.

### Amino Acid Sequence:

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00001 MHHHHHHELRLTPLTVLLRSVLDQLQDKDPARIFAQPVSL
00041 KEVPDYLDHIKHPMDFATMRKRLEAQGYKNLHEFEEDFDL
00081 IIDNCMKYNA RDTVFYRAAVRLRDQGGVVL RQARR
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**Source:** *E. coli*

**Species:** Human

**Biological Activity:** Assay condition: 50 mM HEPES, 50 mM NaCl, and 1 mM CHAPS, pH 7.5. Biotinylated acetyl-histone peptide substrate binding to Bromodomain reaction was performed by adding 200 nM substrate to serially diluted BRD, and incubation for 1 h at RT. Treatment with equivalent detection buffer (2 nM Eu-Anti-His and 40 nM U-light-SA in Assay buffer), and incubation for 1 h at RT subsequently followed.

**Molecular Weight:** 13.7 kDa, observed by reducing SDS-PAGE.

**Formulation:** Sterile liquid solution contains 25mM HEPES, pH7.5, 150mM NaCl, 5% glycerol, 0.5 mM TCEP. Frozen solution.

**Purity:** > 95% by SDS-PAGE and HPLC analysis.

**Endotoxin Level:** < 1EU/ $\mu$ g, determined by LAL method.

**Storage:** BRD1 (561-668) remains stable up to 6 months at -80°C from date of receipt. For maximum recovery of product, centrifuge original vial prior to removing the cap. Aliquot to avoid repeated thawing and freezing.