

BRDT (22-138aa), His, Human

Cat. No.: Z03188-100

Size: 100.0 ug

Synonyms: Bromodomain containing 4, HUNK1, MCAP

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 ϵ -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 BRDT (22-138) with His tag produced in *E.coli* is a single, non-glycosylated polypeptide chain containing 124 amino acids. A fully biologically active molecule, BRDT (22-138) has a molecular mass of 14.9 kDa analyzed by reducing SDS-PAGE and is obtained by proprietary chromatographic techniques at GenScript.

Amino Acid Sequence:

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00001 MHHHHHTKK NGRLTNQLQY LQKVVLKDLW KHSFSWPFQR
00041 PVDVAVKLQLP DYYTIKNPM DLNTIKKRLE NKYYAKASEC
00081 IEDFNTMFSN CYLYNKPGDD IVLMAQALEK LFMQKLSQMP
00121 QEEQ
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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: 14.9 kDa, observed by reducing SDS-PAGE.

Formulation: Sterile liquid solution contains 25 mM HEPES, pH 7.5, 150 mM NaCl, 5% glycerol, 0.5 mM TCEP. Frozen solution.

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

Endotoxin Level: < 1 EU/ μ g, determined by LAL method.

Storage: BRDT (22-138) 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.