

Recombinant BRD7 (129-236) protein

Catalog No: 31381, 31881**Lot No:** 12016003**Expressed In:** *E. coli***Quantity:** 100, 1000 µg**Concentration:** 2.5 µg/µl**Source:** Human

Buffer Contents: Recombinant BRD7 (129-236) protein expressed in *E. coli* at a concentration of 2.5 µg/µl in 25 mM Tris pH 8.0, 500 mM NaCl, 0.04% Triton X-100, 20% glycerol.

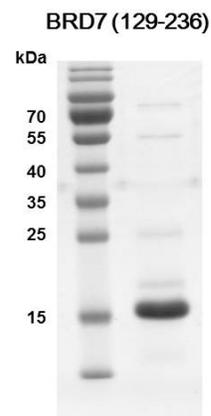
Background: Bromodomain-containing protein 7 (BRD7) belongs to the BET subclass of proteins, which are characterized by two N-terminal bromodomains and one ET (Extra Terminal) domain. BRDs associate with chromatin through their bromodomains that recognize acetylated histone lysine residues. Bromodomains function as 'readers' of these epigenetic histone marks and regulate chromatin structure and gene expression by linking associated proteins to the acetylated nucleosomal targets. The ET domain functions as a protein binding motif and exerts atypical serine-kinase activity. The BET family consists of at least four members in mouse and human, BRD2 (also referred to as FSRG1, RING3), BRD3 (FSRG2, ORFX), BRD4 (FSRG4, MCAP/HUNK1), and BRDT (FSRG3, BRD6). BRD7 interacts with several proteins, including DVL1, PTPN13, IRF2 and HNRPUL1 and functions in the regulation of transcriptional activation and chromatin remodeling. Specifically, BRD7 has been shown to bind dishevelled-1 (DVL1) and enhance Wnt signaling via inhibition of GSK3β. BRD7 also associates with histones and E1B-AP5. In particular, it binds acetylated histone peptides, most notably H3 peptide acetylated at Lys14. BRD7 also inhibits G1-S progression by transcriptional regulation of molecules in the Ras and Rb pathways. BRD7 also suppresses tumorigenicity through binding and acetylation of p53 that results in efficient recruitment of p53 to target promoters and subsequent oncogene-induced senescence.

Protein Details: The peptide corresponding to amino acids 129 - 236 that contains the bromodomain sequences of BRD7 (accession number NM_013263.4) was expressed in *E. coli* and contains an N-terminal His tag and C-terminal FLAG tag with an observed molecular weight of 18.8 kDa. It shows binding specificity for acetylated H3K9, H3K14, H4K8, H4K12 and H4K16. The recombinant protein is >88% pure by SDS-PAGE.

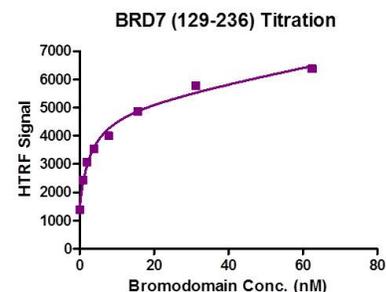
Application Notes: Recombinant BRD7 (129-236) is suitable for use in binding assays, inhibitor screening, and selectivity profiling.

Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is guaranteed for 6 months from date of receipt.

This product is for research use only and is not for use in diagnostic procedures.

**Recombinant BRD7 (129-236) protein gel.**

BRD7 (129-236) protein was run on a 12% SDS-PAGE gel and stained with Coomassie blue.

**Recombinant BRD7 (129-236) HTRF activity assay.**

3 µM histone peptide H4K5/8/12/16 (4Ac) was incubated with BRD7 (129-236) protein in reaction buffer including 50mM HEPES-NaOH pH 7.0, 0.1% BSA for 1 hour at room temperature. Anti-Flag antibody was used to detect reaction products