Recombinant BRD2 (71-194) protein, GST-Tag

Catalog No: 81149, 81849
Lot No: 12918001
Expressed In: *E. coli*

Quantity: 100, 1000 µg
Concentration: 1.5 µg/µl
Source: Human

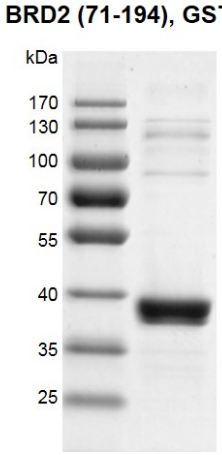
Buffer Contents: Recombinant BRD2 (71-194), GST-Tag protein is supplied in 25 mM Tris-HCl pH 8.0, 300 mM NaCl, 10% glycerol.

Background: Bromodomain-containing protein 2 (BRD2), also known as RING3, 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). BRD proteins are related to the female Sterile Homeotic protein in Drosophila, a gene required maternally for proper expression of other homeotic genes, such as Ubx, which is involved in pattern formation. BRD2 causes elevated protein kinase activity in leukemias. Transgenic mice overexpressing BRD2 in the lymphoid system develop diffuse large-cell lymphoma. BRD2 has been shown to interact with E2F1 and with histone H4 acetylated at Lys12 via its two bromodomains. BRD2 may play a role in spermatogenesis or folliculogenesis. Genetic evidence links the BRD2 gene to both juvenile myoclonic epilepsy and photoparoxysomal responses. It shows binding specificity for acetylated H4K5, H4K5/8, H4K5/12, H4K8/12, H4K12/16, H4K12/16/20 and H4K5/8/12/16.

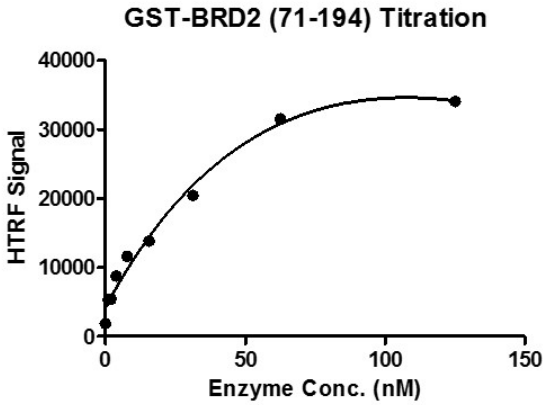
Protein Details: Recombinant BRD2 (71-194), GST-Tag protein that includes amino acids 71-194 (the fist Bromo domain) of human BRD2 protein (accession number NP_005095.1) was expressed in *E.coli* and contains an N-terminal GST tag with a molecular weight of 41 kDa.

Application Notes: This protein is suitable for use in binding assays, inhibitor screening, and selectivity profiling.

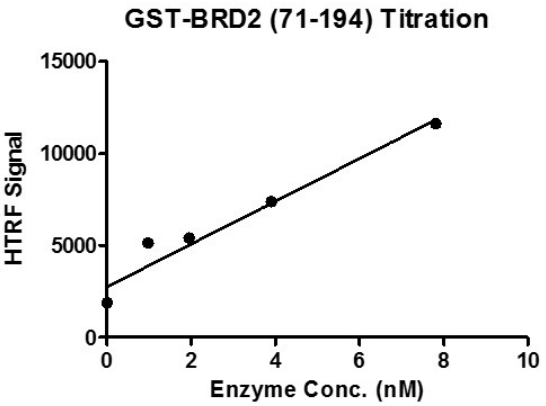
Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is for research use only and is not for use in diagnostic procedures. This product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



Recombinant BRD2 (71-194), GST-Tag, protein gel
10% SDS-PAGE Coomassie staining
MW: 41 kDa
Purity: >85%



HTRF assay for BRD2 (71-194), GST-tag activity
3 µM histone H4K5/8/12/16(ac4) peptide was incubated with different concentrations of BRD2 (71-194), GST-tag protein in a 10 µl reaction system containing 50 mM HEPES-NaOH pH 7.4, 0.1% BSA for 1 hour, then 10 µl GST antibody and SA-XL665 mixture (each 1:100 dilution in the reaction buffer) was added to each reaction system and incubated for 30 min. All the operations and reactions were performed at room temperature. HTRF assay was used for detection.



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