Purified anti-XBP-1s Antibody

Catalog# / Size	658802 / 100 µg
Clone	9D11A43
Regulatory Status	RUO
Other Names	XBP-1 isoform2, Tax-responsive element-binding protein 5 (TREB5), XBP2
Isotype	Mouse IgG2a, κ
Description	XBP-1 is a transcription factor containing a bZIP domain. It was first identified because of its ability to bind X-box, a conserved transcriptional element in the promoter of the human HLA-DR gene. XBP-1 has multiple functions. It controls MHC class II gene regulation and is also essential for differentiation of plasma cells. XBP-1 is upregulated as part of the ER stress response, also known as the unfolded protein response.

Product Details

Verified Reactivity	Human, Mouse
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Partial mouse XBP-1s recombinant protein (162-267aa)
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C.
Application	WB - *Quality tested* ICC, ChIP - *Verified*
Recommended Usage	Each lot of this antibody is quality control tested by Western blotting. For Western blotting, the suggested use of this reagent is 0.5 - 2.0 µg per mL. For ChIP application, use 2 µg of antibody and 10 µg of chromatin per IP. It is recommended that the reagent be titrated for optimal performance for each application.
Application Notes	The clone 9D11A43 recognizes spliced XBP-1 (XBP-1s/isoform 2), which is 371 amino acids and migrates around 55 kD on the SDS-PAGE.
Additional Product Notes	Using this antibody at a ratio higher than 1:5 (µg antibody per ug of chromatin) will increase background
Product Citations	1. Bezu L, *et al.* 2018. Cell Death Differ. 25:1375. PubMed 2. Sundaram A *et al.* 2017. eLife. 6 pii: e27187. PubMed 3. Yu W, *et al.* 2022. Acta Pharm Sin B. 12:2315. PubMed 4. Saito A *et al.* 2017. Journal of neurochemistry. 144(1):35-49 . PubMed 5. Dion W, *et al.* 2022. Sci Adv. 8:eabl4150. PubMed 6. Martinez-Turtos A, *et al.* 2022. Oncoimmunology. 11:2116844. PubMed 7. Sicari D, *et al.* 2020. FEBS J. 287:27. PubMed
RRID	AB_2562960 (BioLegend Cat. No. 658802)

Antigen Details

Distribution	Nucleus.

Function	Upregulated by ER stress, IL-6, and IL-4. Downregulation correlates with tumor progression in prostate cancer. Downregulated by PAX5 transcription factor.
Biology Area	Cell Biology, Immunology, Transcription Factors
Molecular Family	MHC Antigens, Nuclear Markers
Antigen References	1. Liou HC, *et al.* 1990. *Science* 247:1581. 2. Ponath PD, *et al.* 1993. *J. Biol. Chem.* 268:17074. 3. Takahashi S, *et al.* 2002. *Prostate* 50:154.
Gene ID	7494

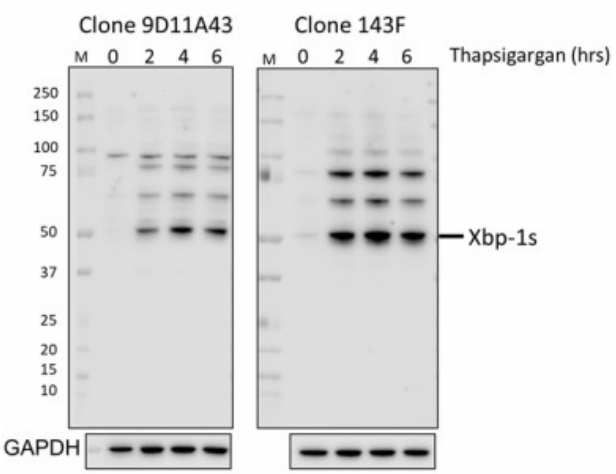
Related Protocols

Western Blotting Protocol

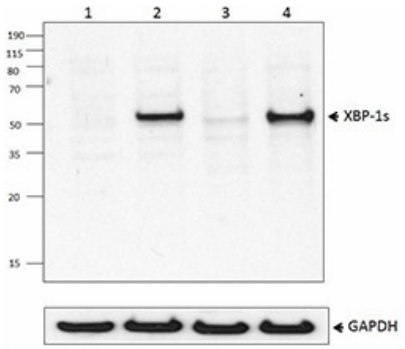
Other Formats

Purified anti-XBP-1s

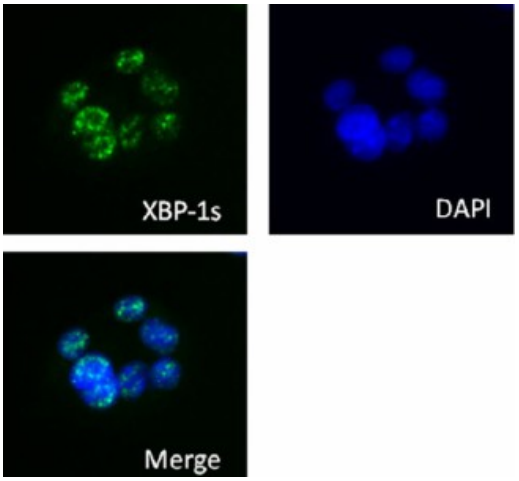
Product Data



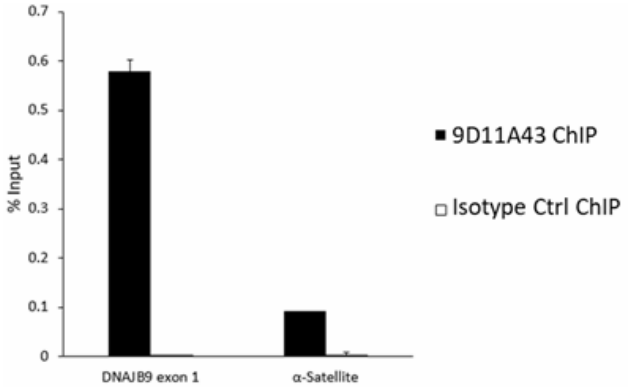
Total cell lysates (15 µg protein) from HepG2 cells treated without (-) or with (+) 300 nM thapsigargan for the indicated timepoints were resolved by 4-12% Bis-Tris gel electrophoresis, transferred to a PVDF membrane, and probed with 0.5 µg/mL (1:5000 dilution) of purified anti-Xbp-1s antibodies (clones 9D11A43 and 143F) overnight at 4°C. Proteins were visualized by chemiluminescence detection using HRP goat anti-mouse IgG (Cat No. 405306) at a 1:3000 dilution. Equal protein loading was confirmed using Direct-Blot™ HRP anti-GAPDH antibody (Cat. No. 607904) used at a 1:25000 dilution (lower). Lane M: Molecular weight ladder.



Western blot analysis of HepG2 untreated (lane 1) cell, HepG2 treated with 300 nM of thapsigargin for overnight (lane 2), Raw264.7 untreated (lane 3) and Raw264.7 treated with 300 nM of thapsigargin for overnight (lane 4) using anti-XBP-1s antibody (clone 9D11A43). Purified anti-GAPDH antibody (Poly6314) was used as a loading control.



HepG2 cells treated with thapsigargin (300nM, 16 hours) were stained with purified anti-XBP-1s (9D11A43) antibody, followed by staining with DyLight 488 conjugated goat anti-mouse IgG (green) antibody. Nuclei were stained with DAPI (blue).



Chromatin Immunoprecipitations (ChIP) were performed using fixed and sonicated chromatin samples from 293T cells treated with tunicamycin (2.0 µg/mL, 8 hr). ChIP was performed with 10.0 µg of chromatin and 2.0 µg of purified anti- XBP-1s antibody (clone 9D11A43) or Go-ChIP-Grade™ purified mouse IgG1, κ isotype ctrl antibody (Cat. No. 400183). The enriched DNA was purified and quantified by real-time qPCR using SYBR Green and primers for the human DNAJB9 exon 1 region and the human α-Satellite repeats. The amount of immunoprecipitated DNA in each sample is represented as a percentage of the total amount of input chromatin, which is equivalent to 100%.

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