#12800 Store at -20°C

STF-1 (D1Z2A) XP® Rabbit mAb

☐ Small 100 µl
(10 western blots)

☐ Petite 40 µl
(4 western blots)

rev. 01/05/15

Cell Signaling TECHNOLOGY®

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Entrez Gene ID #Q13285
UniProt ID #2516

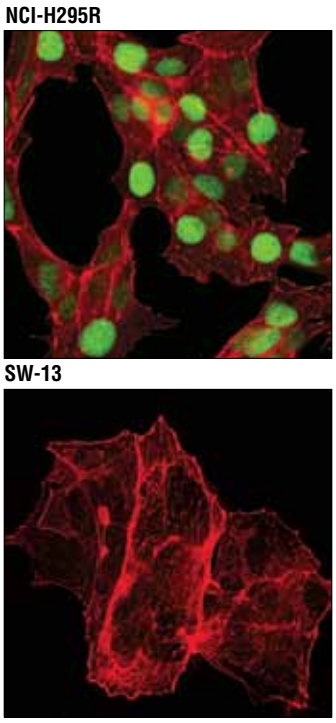
Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP, IF-IC, ChIP Endogenous	H, M, R, (B)	50 kDa	Rabbit IgG**

Background: The orphan nuclear receptor, steroidogenic factor 1 (STF-1, also called Ad4BP), is encoded by the *NR5A1* gene and plays an instrumental role in directing the transcriptional control of steroidogenesis (1). Initially identified as a tissue-specific transcriptional regulator of cytochrome P450 steroid hydroxylases, research studies of both global (2) and tissue-specific knockout mice (3-6) have demonstrated that STF-1 is required for the development of adrenal glands, gonads, ventromedial hypothalamus, and for the proper functioning of pituitary gonadotropes. Indeed, humans with mutations that render *STF-1* transcriptionally inactive can present with testicular failure, ovarian failure, and adrenal insufficiency (7,8). Furthermore, dysregulation of STF-1 has been linked to diseases such as endometriosis (9) and adrenocortical carcinoma (10).

Like other nuclear hormone receptors, STF-1 has a modular domain structure composed of an amino-terminal zinc finger DNA-binding domain, a ligand-binding domain, a carboxy-terminal AF-2 activation domain, and a hinge region with AF-1-like activation activity. STF-1 also contains a fushi tarazu factor 1 box, which functions as an accessory DNA binding domain (11). STF-1 is primarily phosphorylated at Ser203, which is thought to enhance its transcriptional activity by promoting complex formation with transcriptional cofactors (12). In addition to phosphorylation at Ser203, STF-1 is subject to SUMO conjugation and acetylation at ε-amino groups of target lysine residues. Whereas SUMOylation represses STF-1 function (13,14), acetylation enhances its transcriptional activity (15).

Specificity/Sensitivity: STF-1 (D1Z2A) XP® Rabbit mAb recognizes endogenous levels of total STF-1 protein. This antibody does not cross-react with LRH-1/NR5A2.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu184 of human STF-1 protein.



Confocal immunofluorescent analysis of NCI-H295R (positive, upper) and SW-13 (negative, lower) cells using STF-1 (D1Z2A) XP® Rabbit mAb (green). Actin filaments were labeled with DyLight™ 554 Phalloidin #13054 (red).

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. *Do not aliquot the antibody.*

***Species cross-reactivity is determined by western blot.**

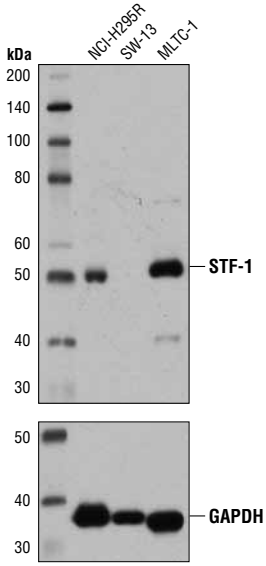
****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:100
Immunofluorescence (IF-IC)	1:100
Chromatin IP	1:50

For product specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.



Western blot analysis of extracts from various cell lines using STF-1 (D1Z2A) XP® Rabbit mAb (upper) and GAPDH (D16H11) XP® Rabbit mAb #5174 (lower).

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.

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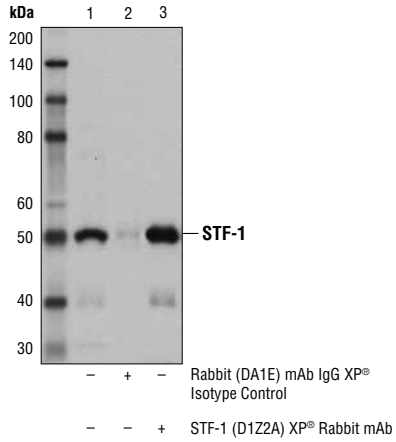
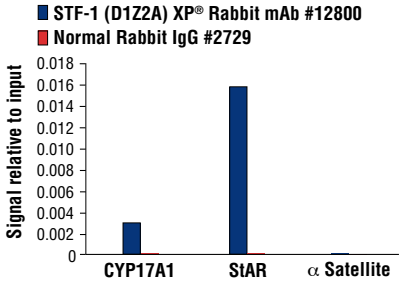
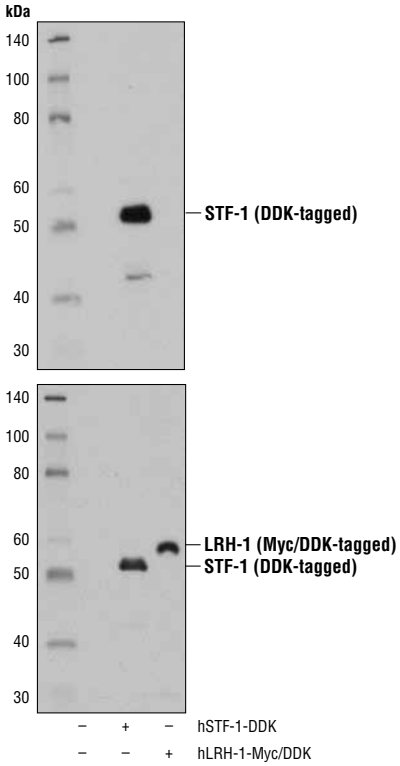
Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide
Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.



Immunoprecipitation of STF-1 from NCI-H295R cell extracts using Rabbit (DA1E) mAb IgG XP® Isotype Control #3900 (lane 2) or STF-1 (D1Z2A) XP® Rabbit mAb (lane 3). Lane 1 is 10% input. Western blot analysis was performed using STF-1 (D1Z2A) XP® Rabbit mAb.



Chromatin immunoprecipitations were performed with cross-linked chromatin from 4 x 10^6 NCI-H295R cells treated with dibutyryl cAMP (0.4 mM) for 1h and either 10 µl of STF-1 (D1Z2A) XP® Rabbit mAb or 2 µl of Normal Rabbit IgG #2729, using SimpleChIP® Enzymatic Chromatin IP Kit (Magnetic Beads) #9003. The enriched DNA was quantified by real-time PCR using human CYP17A1 intron 1 primers, SimpleChIP® Human StAR Intron 1 Primers #12864, and SimpleChIP® Human α Satellite Repeat Primers #4486. The amount of immunoprecipitated DNA in each sample is represented as signal relative to the total amount of input chromatin, which is equivalent to one.



Western blot analysis of extracts from 293T cells, mock transfected (-) or transfected with constructs expressing DDK-tagged full-length human STF-1 (hSTF-1-DDK; +) or Myc/DDK-tagged full-length human LRH-1, isoform 2 (hLRH-1-Myc/DDK; +), using STF1 (D1Z2A) XP® Rabbit mAb (upper) and DYKDDDDK Tag Antibody #2368 (lower).

Background References:

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