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# STF-1 Antibody

Store at -20C  
#8795

**For Research Use Only. Not for Use in Diagnostic Procedures.**

<b>Applications:</b> W	<b>Reactivity:</b> H M	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 50	<b>Source/Isotype:</b> Rabbit	<b>UniProt ID:</b> #Q13285	<b>Entrez-Gene Id:</b> 2516
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## Product Usage Information

### Application

Western Blotting

### Dilution

1:1000

## Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

## Specificity/Sensitivity

STF-1 Antibody recognizes endogenous levels of total STF-1 protein. This antibody does not cross-react with LRH-1/NR5A2.

## Species predicted to react based on 100% sequence homology

Monkey, Bovine, Pig, Horse

## Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu184 of human STF-1 protein. Antibodies are purified by protein A and peptide affinity chromatography.

## 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).

## Background References

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7. Achermann, J.C. et al. (1999) *Nat Genet* 22, 125-6.
8. Lourenço, D. et al. (2009) *N Engl J Med* 360, 1200-10.
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12. Hammer, G.D. et al. (1999) *Mol Cell* 3, 521-6.
13. Chen, W.Y. et al. (2004) *J Biol Chem* 279, 38730-5.
14. Lee, F.Y. et al. (2011) *Dev Cell* 21, 315-27.
15. Chen, W.Y. et al. (2005) *Mol Cell Biol* 25, 10442-53.

## Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

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

**Applications Key**

**W:** Western Blotting

**Cross-Reactivity Key**

**H:** Human **M:** Mouse

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