



CREATING NOVEL ANTIBODIES

## FOCUS ON TRANSCRIPTION FACTOR ANTIBODIES

- Forkhead Transcription Factor Antibodies
- Homeobox Transcription Factor Antibodies
- Kruppel Protein Antibodies
- ETS Protein Antibodies
- HMG Protein Antibodies
- Nuclear Receptor Protein Antibodies
- E-Box Protein Antibodies
- HNF Protein Antibodies



## Forkhead Transcription Factor Antibodies

The transcription factors of the class forkhead (or winged helix) box, also called FOX, is an evolutionarily ancient gene family that is named after the *Drosophila melanogaster* gene fork head (fkh), the first protein in the FOX family that was discovered. This family is characterized by the forkhead box, a sequence of 80 to 100 amino acids forming the DNA-binding domain. This motif is also called the winged helix because of its butterfly-like structure.

Fox proteins have important biological functions, such as cell growth, proliferation, cell cycle control, epithelial cell & erythrocyte differentiation, embryonic development and longevity.

Mutations in members of the FOX gene family lead to diseases with effects ranging from T-cell differentiation to speech impediments. One fascinating example is FOXP2 that is shown to be important for speech acquisition in humans. FOXP2 differs in human by only two amino acids from gorilla and chimpanzee and these residues are thought to create a protein kinase C phosphorylation site that might have been crucial for the adaption needed for speech development. Another example is FOXP3, currently used as a marker for CD25+ CD4+ regulatory T-cells. Mutations in FOXP3 have been linked to neonatal diabetes, polyendocrinopathy and enteropathy (IPEX) in humans.

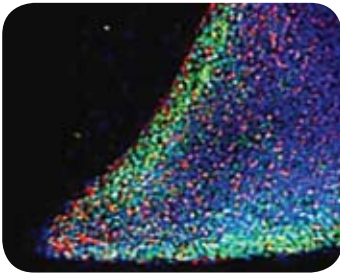
<i>Principle Name</i>	<i>Everest Code</i>	<i>Application Codes</i>	<i>Expected Species Cross-Reactivity</i>	<i>100µg/200µl</i>	<i>20µg/40µl</i>	<i>Product Grade</i>
FOXA1 / HNF3A	EB05999	ELISA, WB	Human, Mouse, Rat, Pig, Cow	✓	✓	Elite
FOXA2 / HNF3B	EB06000	ELISA, WB	Human, Mouse, Rat	✓	✓	Elite
FOXB1 / FKH5	EB06005	ELISA	Human, Mouse, Rat, Dog, Cow	✓		Aspiring
FOXC1 (C Term)	EB06006	ELISA, WB, IHC	Human, Mouse	✓	✓	Elite
FOXC1 (internal)	EB07038	ELISA	Human, Mouse, Pig	✓		Aspiring
FOXC2	EB06007	ELISA, WB	Human, Mouse, Rat, Dog, Cow	✓	✓	Elite
FOXD1 / FREAC4 / FKHL8	EB06008	ELISA	Human, Mouse, Rat	✓		Aspiring
FOXD2	EB06009	ELISA	Human, Mouse, Rat	✓		Aspiring
FOXE1 / TTF2	EB06011	ELISA, IHC	Human	✓		Elite
FOXE2 / HFKL5	EB06012	ELISA	Human	✓		Aspiring
FOXE3 / ASMD	EB06013	ELISA	Human	✓		Aspiring
FOXF1	EB06014	ELISA	Human, Cow	✓		Aspiring
FOXG1 / BF2	EB05608	ELISA, WB	Human, Mouse, Rat, Dog, Cow	✓	✓	Elite
FOXH1 / FAST1	EB06016	ELISA	Human	✓		Aspiring
FOXI1 / FKHL10	EB06019	ELISA	Human	✓		Aspiring
FOXI2 (mouse)	EB07010	ELISA	Mouse, Rat	✓		Aspiring
FOXK2 / ILF (isoform 1)	EB06034	ELISA, WB	Human	✓		Elite
FOXL1 / FKHL6 / FREAC7	EB06021	ELISA	Human	✓		Aspiring
FOXL2 / BPES	EB06022	ELISA, WB	Human, Mouse, Rat, Cow	✓		Elite
FOXN1	EB06069	ELISA, IHC	Human	✓		Elite
FOXN2 / HTLF	EB06033	ELISA	Human	✓		Aspiring
FOXO1	EB07733	ELISA, WB	Human	✓		Elite
FOXO3A / FOXO3 / FKHL1	EB06392	ELISA, WB	Human, Mouse, Rat, Dog, Pig, Cow	✓	✓	Elite
FOXO4 / MLLT7	EB07734	ELISA, WB	Human	✓		Elite
FOXP2 (C terminus)	EB05226	ELISA, WB	Human, Mouse, Rat, Dog, Pig, Cow	✓	✓	Elite
FOXP2 (internal)	EB07520	ELISA, WB	Human, Mouse, Rat, Dog	✓		Elite
FOXP3 / SCURFIN	EB05294	ELISA, IHC	Human, Dog, Pig	✓	✓	Elite
FOXP3 / Scurfin (Mouse)	EB06376	ELISA	Mouse, Rat	✓	✓	Aspiring
FOXP4	EB06421	ELISA, WB	Human, Mouse, Cow	✓		Elite
FOXQ1 / FKHL1	EB06032	ELISA, WB	Human, Mouse	✓		Elite

## Homeobox Transcription Factors Antibodies

The homeobox represents a consensus sequence of 60 amino acids serving as the DNA-binding domain for this group.

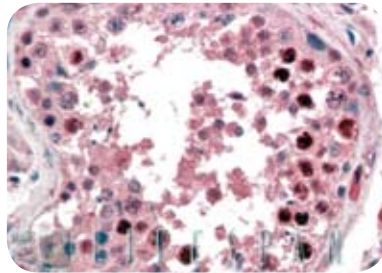
<i>Principle Name</i>	<i>Everest Code</i>	<i>Application Codes</i>	<i>Expected Species Cross-Reactivity</i>	<i>100µg/200µl</i>	<i>20µg/40µl</i>	<i>Product Grade</i>
GBX2	EB07377	ELISA, WB	Human, Mouse, Rat, Dog	✓		Elite
Homeobox A5	EB08093	ELISA	Human, Mouse	✓		Aspiring
Homeobox B13	EB07495	ELISA, WB	Human	✓		Elite
HOXD10	EB08884	ELISA, WB	Human, Mouse, Rat, Horse, Cow	✓		Elite
LHX2	EB08573	ELISA, WB	Human, Mouse, Rat, Dog	✓		Elite
LMX1B	EB08844	ELISA	Human; Mouse, Rat	✓		Aspiring
MSX1	EB06397	ELISA, IHC	Human, Mouse, Rat, Cow	✓		Elite
MEIS1	EB09039	ELISA, WB	Human, Mouse, Rat, Cow	✓		Elite
NANOG	EB06860	ELISA, WB, IF	Human, Dog	✓		Elite
NANOG (C Terminus)	EB07693	ELISA, WB, IHC	Human	✓		Elite
Pdx1 (zebrafish)	EB07974	ELISA	Zebrafish	✓		Aspiring
PITX3	EB08284	ELISA, WB	Human	✓		Elite
PRRX1	EB08175	ELISA, WB	Human, Mouse	✓		Elite
Six3b (zebrafish)	EB07961	ELISA	Zebrafish	✓		Aspiring

Anti-NANOG antibody: EB06860

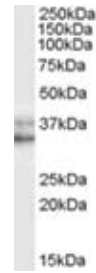


EB06860 (5 $\mu$ g/ml) staining (green) parts of a colony of induced pluriform stem cells derived from Human Keratinocytes. Data kindly provided by CMRB, Center of Regenerative Medicine in Barcelona, Spain. Lit: - Aasen T. et al., Nat Biotechnol. 2008 Nov;26(11):1276-84. Epub 2008 Oct 17. - Raya A. et al., Nature. 2009 Jul 2;460(7251):53-9. Epub 2009 May 31.

Anti-NANOG (C-Terminus) antibody: EB07693

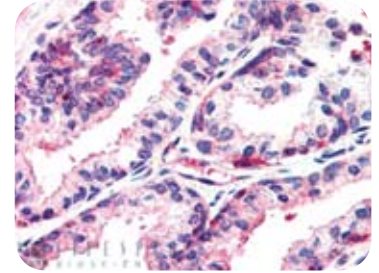


EB07693 (2 $\mu$ g/ml) staining of paraffin embedded Human Testis. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.



EB07693 (0.05 $\mu$ g/ml) staining of HeLa (nuclear) cell lysate (35 $\mu$ g protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

Anti-MSX1 antibody: EB06397



EB06397 (2.5 $\mu$ g/ml) staining of paraffin embedded Human Prostate. Steamed antigen retrieval with citrate buffer pH 6, AP-staining

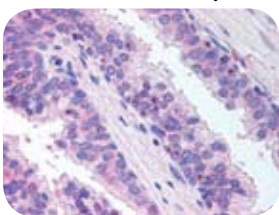
## Kruppel Protein Antibodies

Principle Name	Everest Code	Application Codes	Expected Species Cross-Reactivity	100 $\mu$ g/200 $\mu$ l	20 $\mu$ g/40 $\mu$ l	Product Grade
GLI1	EB07027	ELISA	Human	✓		Aspiring
GLI2	EB07136	ELISA	Human, Mouse	✓		Aspiring
GLI3	EB07137	ELISA	Human, Mouse, Rat, Dog	✓		Aspiring
GLIS1	EB05862	ELISA	Human, Mouse, Rat	✓		Aspiring
KLF1 / EKLF	EB05401	ELISA, ChIP	Human, Dog, Pig, Cow	✓		Elite
KLF15	EB05463	ELISA, WB	Human, Mouse, Rat, Pig	✓		Elite
KLF16 / DRRF	EB05466	ELISA, WB	Human, Dog	✓		Elite
KLF3 / BKLF	EB05400	ELISA, WB	Human, Mouse, Rat, Dog, Pig, Cow	✓		Elite
KLF4 / GKLF	EB05473	ELISA, WB	Human, Mouse, Rat, Cow	✓	✓	Elite
KLF8 / BKLF3	EB05469	ELISA, WB	Human	✓		Elite
RFLAT / KLF13	EB05477	ELISA	Human, Mouse, Rat, Dog, Pig, Cow	✓		Aspiring

## ETS Protein Antibodies

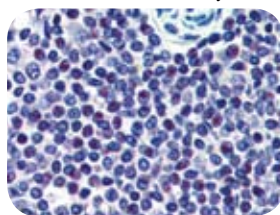
Principle Name	Everest Code	Application Codes	Expected Species Cross-Reactivity	100 $\mu$ g/200 $\mu$ l	20 $\mu$ g/40 $\mu$ l	Product Grade
ELF1	EB05528	ELISA, WB	Human, Mouse	✓		Elite
ELF2 / NERF	EB05527	ELISA	Human, Mouse, Rat, Dog, Cow	✓		Aspiring
ELF3 / ERT/ ESX	EB05503	ELISA, WB	Human	✓		Elite
ELF5	EB05511	ELISA	Human, Mouse, Rat	✓		Aspiring
ERG	EB07081	ELISA, IHC	Human, Mouse, Rat	✓		Elite
ETV1	EB07080	ELISA	Human, Mouse, Rat, Dog	✓		Aspiring
ETV2	EB08077	ELISA	Human	✓		Aspiring
PU.1	EB08429	ELISA, WB	Human, Rat	✓		Elite

Anti-ERG antibody



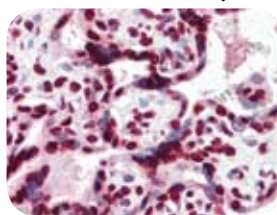
EB07081 (10 $\mu$ g/ml) staining of paraffin embedded Human Prostate. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.

Anti-HMG20A antibody



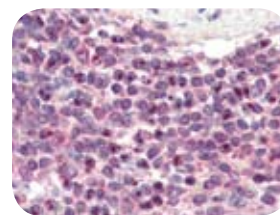
EB05594 (2.5 $\mu$ g/ml) staining of paraffin embedded Human Spleen. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.

Anti-HMGA1 antibody



EB06859 (4 $\mu$ g/ml) staining of paraffin embedded Human Placenta. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.

Anti-LXR beta / NR1H2 antibody



EB06521 (3 $\mu$ g/ml) staining of paraffin embedded Human Spleen. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.



EB06521 (1 $\mu$ g/ml) staining of Human Bone Marrow lysate (35 $\mu$ g protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

## HMG Protein Antibodies

Principle Name	Everest Code	Application Codes	Expected Species Cross-Reactivity	100µg/200µl	20µg/40µl	Product Grade
HMG20A	EB05594	ELISA, IHC	Human, Mouse, Rat, Dog, Pig	✓		Elite
HMGA1	EB06859	ELISA, IHC	Human, Mouse, Rat, Dog, Pig, Cow	✓		Elite
HMGA1 (aa9-21)	EB09567	ELISA, WB	Human, Mouse, Rat, Dog, Cow, Pig	✓		Elite
HMGB3 / HMG4	EB09248	ELISA, WB	Human, Mouse, Cow	✓		Elite
SOX1	EB08301	ELISA	Human, Mouse	✓		Aspiring
SOX11 / SRY-box11	EB07386	ELISA	Human	✓		Aspiring
SOX17	EB08184	ELISA	Human, Rat	✓		Aspiring
TOX3	EB07984	ELISA	Human, Mouse, Rat	✓		Aspiring

## Nuclear Receptor Protein Antibodies

Principle Name	Everest Code	Application Codes	Expected Species Cross-Reactivity	100µg/200µl	20µg/40µl	Product Grade
COUP-TF I / EAR3 / NR2F1	EB05637	ELISA	Human, Mouse, Rat, Dog, Cow	✓		Aspiring
DAX1 / NR0B1	EB07778	ELISA, WB	Human	✓		Elite
EAR2 / NR2F6	EB05636	ELISA	Human, Mouse, Rat, Dog	✓		Aspiring
Farnesoid X receptor / HRR1	EB07540	ELISA, WB	Human, Dog	✓		Elite
LXR alpha / LXR beta	EB06522	ELISA, WB	Human, Mouse, Rat, Dog, Cow	✓	✓	Elite
LXR beta / NR1H2	EB06521	ELISA, WB, IHC	Human, Mouse, Rat, Dog	✓		Elite
Nur77 / NR4A1 (isoform a)	EB07404	ELISA, WB	Human, Mouse, Rat, Dog	✓		Elite
PXR / NR1I2	EB09172	ELISA, WB	Human	✓		Elite
VDR	EB06803	ELISA, WB	Human, Mouse, Rat, Dog	✓	✓	Elite

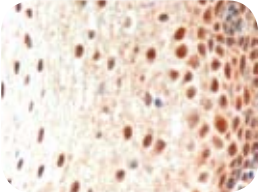
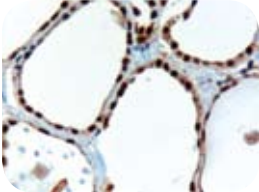

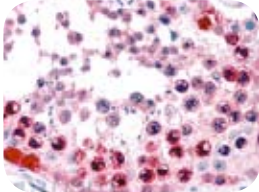
## E-box Protein Antibodies

Principle Name	Everest Code	Application Codes	Expected Species Cross-Reactivity	100µg/200µl	20µg/40µl	Product Grade
AREB6 / ZEB1	EB09166	ELISA, WB	Human, Mouse, Rat	✓		Elite
MSC	EB05053	ELISA	Human	✓		Aspiring
Snail homolog 1 / SNAI1	EB07405	ELISA	Human, Mouse, Rat	✓		Aspiring
TCF1 / HNF1	EB07589	ELISA	Human, Mouse, Rat, Dog	✓		Aspiring
TCF2 / VHNF1	EB07588	ELISA, WB	Human, Mouse, Rat, Dog	✓		Elite
TCF3 / ITF1	EB07587	ELISA, WB	Human	✓		Elite

## HNF Protein Antibodies

Principle Name	Everest Code	Application Codes	Expected Species Cross-Reactivity	100µg/200µl	20µg/40µl	Product Grade
FOXA1 / HNF3A	EB05999	ELISA, WB	Human, Mouse, Rat, Pig, Cow	✓		Elite
FOXA2 / HNF3B	EB06000	ELISA, WB	Human, Mouse, Rat	✓		Elite
FOX11 / FKHL10	EB06019	ELISA	Human	✓		Aspiring
HNF4A	EB06700	ELISA, WB	Human, Dog, Pig	✓		Elite
TCF1 / HNF1	EB07589	ELISA	Human, Mouse, Rat, Dog	✓		Aspiring
TCF2 / VHNF1	EB07588	ELISA, WB	Human, Mouse, Rat, Dog	✓		Elite

## Examples of Antibodies to Transcription Factors of Other Groups

Anti-PAX3 antibody	Anti-PAX8 (N Terminus) antibody	Anti- STAT3 (isoform 1 and 2) antibody	Anti-ATF7 antibody
			
EB06343 (3µg/ml) staining of paraffin embedded Human Oesophagus. Microwave antigen retrieval with Tris/EDTA buffer pH9, HRP-staining.	EB05513 (3µg/ml) staining of paraffin embedded Human Thyroid Gland. Microwave antigen retrieval with Tris/EDTA buffer pH9, HRP-staining.	WB: EB05073 (1µg/ml) staining of NIH3T3 lysate (35µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence. IHC: EB05073 overnight staining at 10µg/ml on 4% PFA-fixed mouse thymus. Subsequently labelled by Biotinylated mouse anti-goat IgG, and Streptavidin-AP. Stained with BCIP/NBT. Data kindly provided by Dr. Marella de Bruijn, MRC Mol. Haematol. Unit, WIMM, JR Hospital, Oxford.	WB: EB05244 staining (0.5µg/ml) of HeLa lysate (RIPA buffer, 35µg total protein per lane). Primary incubated for 1 hour. Detected by western blot using chemiluminescence. IHC: EB05244 (3.8µg/ml) staining of paraffin embedded Human Testis. Steamed antigen retrieval with citrate buffer pH 6, AP-staining.
Everest Biotech offers additional Transcription Factor Antibodies. Please visit the website for more details.			

[www.everestbiotech.com](http://www.everestbiotech.com)

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