



# Recombinant Protein Technical Manual

## Recombinant Human HOXB4 Protein (His Tag)

RPES1043

### Product Data:

**Product SKU:** RPES1043

**Size:** 10µg

**Species:** Human

**Expression host:** E. coli

**Uniprot:** P17483

### Protein Information:

**Molecular Mass:** 29.8 kDa

**AP Molecular Mass:** 36 kDa

**Tag:** N-6His

**Bio-activity:**

**Purity:** > 95 % as determined by SDS-PAGE

**Endotoxin:** < 1.0 EU per g as determined by the LAL method.

**Storage:** Store at < -20°C, stable for 6 months. Please minimize freeze-thaw cycles.

**Shipping:** This product is provided as liquid. It is shipped at frozen temperature with blue ice/gel packs. Upon receipt, store it immediately at < -20°C.

**Formulation:** Supplied as a 0.2 µm filtered solution of 4mM HCl.

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:**

**Synonyms:** Homeobox protein Hox-B4; Homeobox protein Hox-2.6; Homeobox protein Hox-2F; HOXB4; HOX2F

## Immunogen Information:

**Sequence:** Met1-Leu251

## Background:

Homeobox B4 (HOXB4) is encoded by the HOXB4 gene which is a member of the the class I homeobox (HOX) gene family and encodes a nuclear protein with a homeobox DNA-binding domain. These genes are master control regulators of developmental programs including embryonic and adult hematopoiesis. Multiple HOX genes, including HOXB4, are highly expressed in the hematopoietic stem cells (HSC) compartment. HOXB4 gene can act in opposite ways when expressed by different cells, promoting the proliferation of stem cells whilst activating the apoptotic pathway in some embryonic structures. The protein HOXB4, as a homeodomain transcription factor, has been shown to be an important regulator of stem cell renewal and hematopoiesis. In cellular or ectopic expression of HOXB4 expands hematopoietic stem and progenitor cells in vivo and in vitro, making it a potential candidate for therapeutic stem cell expansion.