



# Recombinant Protein Technical Manual

**Recombinant Human Histone cluster 2  
H2BE/HIST2H2BE Protein  
RPES1815**

## Product Data:

**Product SKU:** RPES1815

**Size:** 20µg

**Species:** Human

**Expression host:** E. coli

**Uniprot:** Q16778

## Protein Information:

**Molecular Mass:** 14.2 kDa

**AP Molecular Mass:** 16 kDa

**Tag:**

**Bio-activity:**

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

**Endotoxin:** Please contact us for more information.

**Storage:** Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from sterile 2mM β-Mercaptoethanol, pH 6.9

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

**Application:**

**Synonyms:** GL105;H2B;H2B.1;H2BFQ;H2BGL105;H2BQ;MGC119802;MGC119804;MGC129733;MGC129734

## Immunogen Information:

**Sequence:** Met 1-Lys 126

## Background:

Histones are a complex family of highly conserved basic proteins responsible for packaging chromosomal DNA into nucleosomes. Histone proteins exhibit two levels of diversity: 1. evolutionary diversity between species and 2. subtype diversity in a class (H1, H2A, H2B, H3 or H4) within a species. It has become more and more evident that histone modifications are key players in the regulation of chromatin states and dynamics as well as in gene expression. Therefore, histone modifications and the enzymatic machineries that set them are crucial regulators that can control cellular proliferation, differentiation, plasticity, and malignancy processes. However, extracellular histones are a double-edged sword because they also damage host tissue and may cause death. Histones bound to platelets, induced calcium influx, and recruited plasma adhesion proteins such as fibrinogen to induce platelet aggregation. Histone H2B proteins have been studied in a variety of species and is easily detected in most species. The reversible ubiquitylation of histone H2B has long been implicated in transcriptional activation and gene silencing. Phosphorylation of H2B serine 32 occurs in normal cycling and mitogen-stimulated cells. Notably, this phosphorylation is elevated in skin cancer cell lines and tissues compared with normal counterparts. HIST2H2BE is a member of the histone H2B family, and generates two transcripts through the use of the conserved stem-loop termination motif, and the polyA addition motif.