

# Recombinant Human CALR/Calreticulin Protein (His Tag)



Catalog Number:PKSH030606

**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

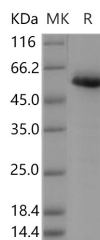
## Description

<b>Synonyms</b>	cC1qR;CRT;HEL-S-99n;RO;SSA
<b>Species</b>	Human
<b>Expression Host</b>	HEK293 Cells
<b>Sequence</b>	Met 1-Ala413
<b>Accession</b>	P27797
<b>Calculated Molecular Weight</b>	47.4 kDa
<b>Observed molecular weight</b>	58 kDa
<b>Tag</b>	C-His

## Properties

<b>Purity</b>	> 95 % as determined by reducing SDS-PAGE.
<b>Endotoxin</b>	< 1.0 EU per µg of the protein as determined by the LAL method.
<b>Storage</b>	Generally, 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.
<b>Shipping</b>	This product is provided as lyophilized powder which is shipped with ice packs.
<b>Formulation</b>	Lyophilized from sterile PBS, pH 7.4 Normally 5 % - 8 % trehalose, mannitol and 0.01 % Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
<b>Reconstitution</b>	Please refer to the printed manual for detailed information.

## Data



> 95 % as determined by reducing SDS-PAGE.

## Background

Calreticulin is a multifunctional protein. It acts as a main Ca<sup>2+</sup>-binding (storage) protein in the lumen of the endoplasmic reticulum. Calreticulin binds Ca<sup>2+</sup> ions (a second messenger in signal transduction); rendering it inactive. The Ca<sup>2+</sup> is bound with low affinity; but high capacity; and can be released on a signal. Located in storage compartments associated with the endoplasmic reticulum; calreticulin also binds to misfolded proteins and prevents them from being exported from the endoplasmic reticulum to the golgi apparatus. The amino terminus of calreticulin interacts with the DNA-binding domain of the glucocorticoid receptor and prevents the receptor from binding to its specific glucocorticoid response element. Calreticulin reduces the binding of androgen receptor to its hormone-responsive DNA element and inhibits androgen receptor and retinoic acid receptor transcriptional activities in vivo; as well as retinoic acid-induced

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neuronal differentiation. Therefore; calreticulin acts as a significant modulator of the regulation of gene transcription by nuclear hormone receptors.

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