

DESCRIPTION

Source *E. coli*-derived
Pro2-Asp100
Accession # P05114

N-terminal Sequence Analysis Pro2

Predicted Molecular Mass 11 kDa

SPECIFICATIONS

SDS-PAGE 20 kDa, reducing conditions

Activity Measured by its ability to induce IL-6 secretion by monocyte-derived dendritic cells.
The ED₅₀ for this effect is 0.6-3 µg/mL

Endotoxin Level <0.10 EU per 1 µg of the protein by the LAL method.

Purity >95%, by SDS-PAGE with silver staining.

Formulation Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 500 µg/mL in PBS.

Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

High-mobility group nucleosome-binding protein 1 (HMGN1), also known as HMG-14, is a member of the family of non-histone chromosomal proteins that play important roles in chromatin remodeling (1, 2). HMGN1 contains an N-terminal domain that interacts with nucleosomes and a C-terminal domain that assists chromatin unfolding (2, 3). Human HMGN1 shares 80% amino acid sequence identity with mouse and rat HMGN1. Alternative RNA processing generates a long isoform with a 45 amino acid insertion following Met1 (4). The trafficking of HMGN1 between the nucleus and cytoplasm is regulated by its serine phosphorylation at multiple sites (5, 6). In the nucleus, HMGN1 preferentially associates with sites of chromatin remodeling and gene transcription, allowing it to modulate the expression of a wide variety of genes (7, 8). It contributes to DNA damage repair by directly associating with and activating the double strand break sensor PARP-1 (9). HMGN1 is additionally one of several alarmins, proteins that are normally intracellular but are released following tissue damage or necrosis (1). In this setting, HMGN1 promotes dendritic cell maturation, recruitment to sites of inflammation, and production of Th1 inflammatory cytokines (10). These pro-inflammatory activities are dependent on the direct association of HMGN1 with the TLR4-MD2 complex on dendritic cells (10, 11).

References:

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