Leinco Technologies, Inc.
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Rotavirus (RV-A), VP6
Recombinant Protein

Product Information
Product No.: R341
Storage: -20 to -80 °C

Product Description
Background:
Rotaviruses are non-enveloped viruses of the Reoviridae family that feature a capsid composed of structural proteins (VP1-VP4 and VP6-VP7) as well as non-structural proteins (NSP1-NSP5/6)1. VP6 is used for classifying the RV type, and based on its serological cross-reactivity and genetic variability, ten groups (RVA-RVJ) have been established as well as four subgroups (SGI, II, I+II, and non-I, non-II). Of these, group A rotavirus (RVA) is the leading cause of acute gastroenteritis in children under five.

VP6 protein is highly abundant, conserved, antigenic, and immunogenic1. Functionally, VP6 is the structural protein that forms the middle capsid layer that surrounds the core shell of RV1. It assembles as 260 trimers with a T=13 I icosahedral lattice and has the ability to interact with itself, VP2, VP4, and VP7. Assembly of trimeric VP6 occurs spontaneously, and oligomer formation is an intrinsic property of the protein. VP6 produced by in vitro expression systems form trimers ordered into hexagons, and can form nanospheres, nanotubes, and sheets depending on pH and ionic strength.

VP6 protein has been identified as a new generation RV vaccine candidate1. VP6 DNA vaccines, VP6 proteins, and self-assembled VP6 all induce a response and/or protection in mice challenged with RV. VP6 is also the basis of a rapid nanobody-based ELISA able to identify RVA in feces from pediatric patients1.

Expression Host:
HEK-293 Cells

Format:
Purified No Carrier Protein

Storage and Stability
1 month, 2 to 8 °C under sterile conditions after opening.
1 year from date of receipt, -20 to -80 °C sterile conditions after opening.
Avoid Repeated Freeze Thaw Cycles.

Applications
Applications and Recommended Usage (Quality Tested By Leinco):
Lateral Flow,
WB,
ELISA

Country of Origin
USA

References
1) Afchangi A, Jalilvand S, Mohajel N, et al. Rev Med Virol. 29(2):e2027. 2019.
2) Vega CG, Garaicoechea LL, Degiuseppe JI, et al. J Virol Methods. 298:114279. 2021

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