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| ***Ir*CP3 (GenBank KP663716)** |
| **Domain structure**  **vWD**  (1356‒1514)  **DUF1943**  (658‒945)  **Vitellogenin\_N**  (18‒619)    1  **-C**  **N-**  1537 |
| **His-tagged recombinant fragment - r*Ir*CP3 (18-619)**  MRGSHHHHHHGMASMTGGQQMGRDLYDDDDKDHPFTFEVGKDYVYHYNGKMQVYNPEQPLQSSGFAFRSKVVAQPRPDHTHFKIIDFEVDSFNGDHVHVGEHEFNYHSTEALKQFIERPFAGKFSEGKLEEAELSKSEPKWARNLKKGVLSIFQLDLVKGRHDHPHAKQFHVREEGLHGNCDTLYVVAEEEGHLKVTKIKNLEKCDKEHYAVYGRIKGHECVDCEAQETHPFVATSQVKYRLDGTPEHYVINHACATSENVFRPFGQGKTFVAQLNRTLDLEEVHDANTDTQLPEDLEKVHHIAQTFPESDEVESLEELKHVNRYVTTFDLSTDKDKFISGLNHLAALEYEDSDIKDVHSKESGGLNFLILFGSLASMPFEDIAHVYEQAVANAPEASKSQVRKVFLDLLSAVGNNPHAAFGLQLVKEDKLTDEEAEHFLAKLALNLKENSPALLTELAEVCEHVKPKRPVWVNCQLALSTLAGQEGCVRAKTDKEQDEGFCKPSIVSHFFNYEIKPEDKKDQPEYKRTVYMKAAGNLATRGAVHYLERYVSDTNQPEYRRSAALWAMVRAAPHHHELVRDVALPLYKNKSETAYLRIGAFVNVLMTKPDLYLLKYIGHNIIDDPSDQLASYVTSAFR |
| ***Is*Vg1 (ISCW013727)** |
| **Domain structure**  **Vitellogenin\_N**  (33‒243,262‒723)  **DUF1943**  (755‒992)  **vWD**  (1491‒1659)  1  **-C**  **N-**  1936 |
| **His-tagged recombinant fragment - r*Ir*Vg1 (34‒723)**  MRGSHHHHHHGMASMTGGQQMGRDLYDDDDKDHPFTVYKVNGTVTLKTLELDVTEGPALTYEGDLAVQKLTETDYVAKFLNFTLVKFDKVLGDVHHFEPHYESSLYGQEVDYFQHLQYPVRFTLKQGKVVEYGVAQEVRAGALNVYKAVLTLLQSQPETFQELPTVVSYYEDGVSGYCRVNYELQSLDAHVYTGANVVNVTKTKYLDDCKKTRPVYTVDSVEVQGYPPLCNKHLPNNFLPGYQEDTAEYEASPTVGCPVGYKPFNTLVTAHEVSYYNLSDNVLESAYTESLDVLNVFTGKVVVKTLLKVLLAHVDGPQLEEFTPVQTYQTLELTLPETSHYFDLPVYSLLVETPEEGPLKFPEALTTVVDELVSLEVEDNTAEPKQTPGLLLQLVKTVGVLTFEQLKQTVPEFLQRPVLELAPHEQVHRSLWVDLVGKAGSKSSLDLVLYLLEQNLLTRNEARRVLQDVAAFKAYPEKETLEKYLEFALGQSQVLPPLVFSTLLHTLGELVNEACPSEVEYSSYEEGYLVEVEEHAPLHRLSLPVGAQCTVQDLQQYVLRISEALKQTDDFKKVVAYLHGLGKFAKPEVLPVLLAYVNGTAENLYRLVSEGEDYLESVYFVRKAALLALDHVVKYYPKEVSPLVRTLVLNTTEPTDLRTLAFDIWLKSVPAKWDLQQVVLAAKTDLSLEFGTYEGTALK |
| ***Is*Vg2 (ISCW021228)** |
| **Domain structure**  **Vitellogenin\_N**  (28‒248,255‒745)  **VWD**  (1321‒1488)    1  **-C**  **N-**  1644 |
| **His-tagged recombinant fragment - r*Ir*Vg2(28‒744)**  MRGSHHHHHHGMASMTGGQQMGRDLYDDDDKDHPFTFEPNQEYLYKYRTAVSLSLPLKATHATGEETYGLLSVVVKEASGTGRSLVLQLLNVTSTLYDKEVEDQTEPVPGVYHQPLPVFESYQTGPVVLKLVDHSVESLEVPVGVPEEVVNLYRGLASVLTLSNPSYKKVPFTKEVPLALNDDVVVYKVYEDDLVGTCETVYNVLSSPHDEYVLNFTKTKNYHKCVGKTTVFQHVDYEHSGCPHACLKHQPKPLSETLEPELSDYVDPYGGGCPTETHLKNDLAESFLTVHYNVSLHQEVGVLEEVKAIDKKVLTSGKQQLVSTSVLHLELLLKTTPFTAVGPLEDVKTYTNLSYVYPKQHYSWHGQLYELEHLSLYGPVDTVEARTAVRGLLDQLAGLLVLDDLEVKDDYADLVSQLLTAVNVLKEYDLELLLQTVVPLENVKVVSEKEYIERKLLLDVLSLAGTDAAAKTVLRLLLEQKLTLVEAVHVLTSLQTSLVKPSTEVLDLLLDLATGGVLEKDRLLYSTAYLTLAKVVSKHCHLYDTTSHVPYGKLLRMNELDAIKKKTVPHLPTYRSMKTLKPRMSGRQYQETETEEPQYTGVPVTCTSQDYLKYVQALVQKLNEAKEFHQVTVLVHALTQLQHPEALKALVPVVLGKHHLCQTTLPEEEQSESCQYLRLVTLYALRHSLKHHAAEIQPLAQTVYFNTDEDYELRNAALVLLMGSHPPEPVLARVVLTLQKELNLQVASFTTLRCN |
| **Amino-acids identity matrix of recombinant fragments**   |  |  |  |  | | --- | --- | --- | --- | | **r*Ir*CP3** | **r*Ir*Vg1** | **r*Ir*Vg2** |  | |  | **14.5%** | **15.8%** | **r*Ir*CP3** | |  |  | **22.3%** | **r*Ir*Vg1** | |  |  |  | **r*Ir*Vg2** | |