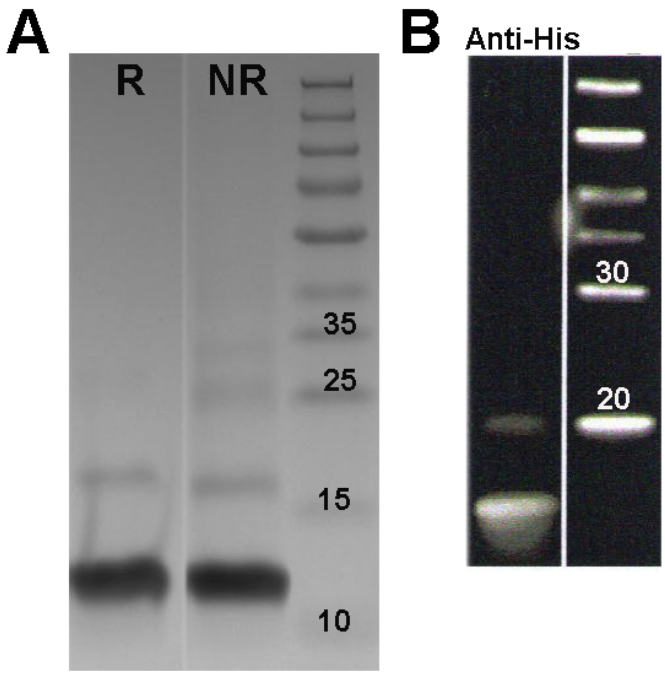
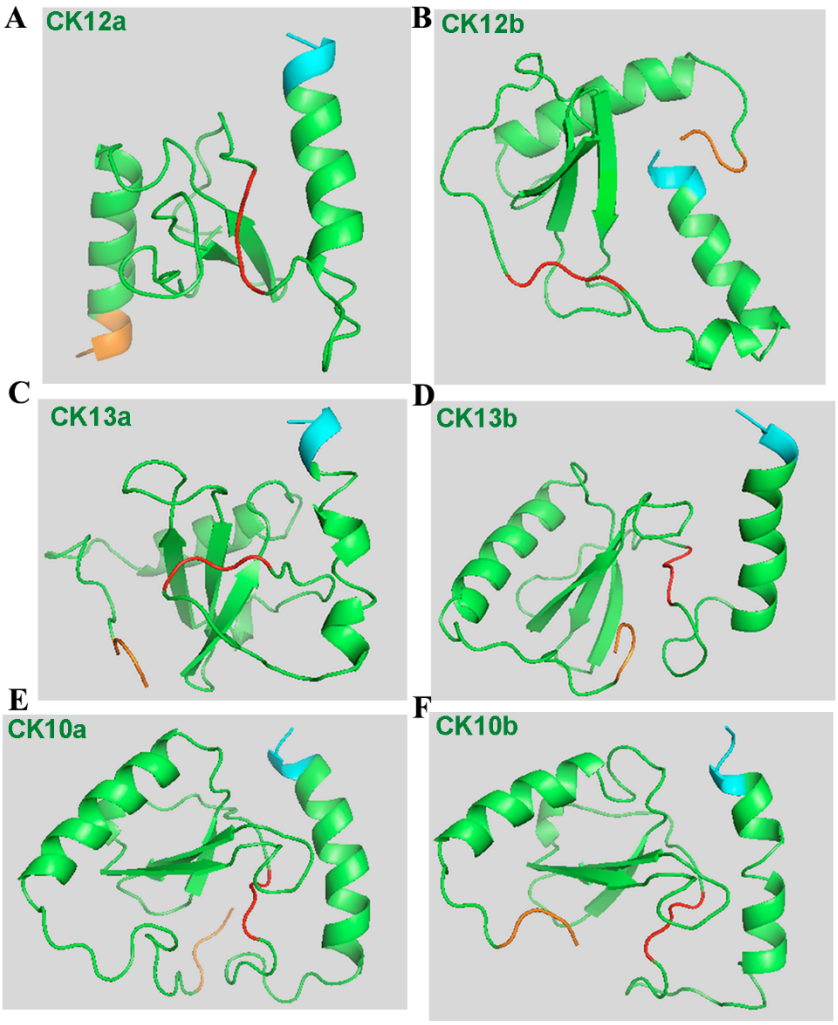
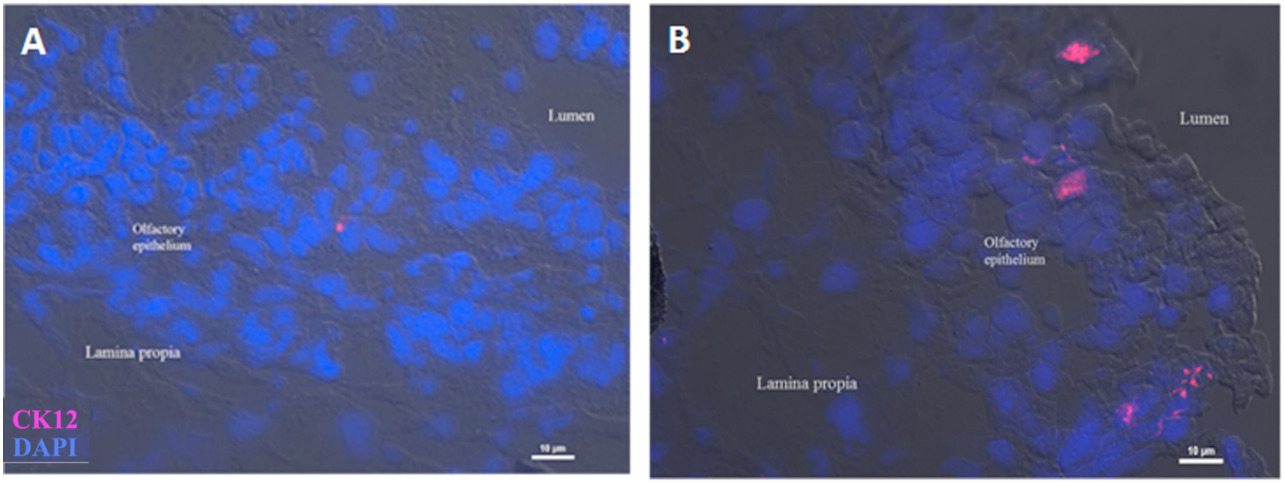


Supplemental Figure 1: Production of trout recombinant protein CK12a (rCK12a). rCK12a was produced by bacterial expression system and then refolded by gel filtration. **(A)** SDS-PAGE confirmed the presence of the recombinant protein (rCK12a) band at expected molecular weight (12 KDa). R: reducing and NR: non-reducing conditions. **(B)** Immunoblot using anti-Histag antibody confirmed the presence of the recombinant protein (rCK12a) band at expected molecular weight.



Supplemental Figure 2: 3-D protein structure prediction of the six CCL19-like molecules. **(A)** CK12a, (**B)** CK12b, (**C)** CK13a, **(D)** CK13b, **(E)** CK10a and **(F)** CK10b was performed via Phyre2 online tool (http://www.sbg.bio.ic.ac.uk/phyre2/html/page.cgi?id=index) and the .pdb files were modeled using PyMOL.



Supplemental Figure 3: CK12 expression is up-regulated in the olfactory organ following nasal vaccination with IHNV (4 dpi). Olfactory organ cryosections from adult control or nasally vaccinated IHNV rainbow trout (4 dpi) were stained with rainbow trout CK12 oligonucleotide probes labeled at their 5' ends with indodicarbocyanine. **(A)** FISH staining of control olfactory organ and (**B**) IHNV vaccinated (4 dpi) olfactory organ labelled with CK12 probe (Cy5, pink). DAPI was used to stain cell nuclei (blue). Fluorescence images were overlaid with differential interference contrast (DIC) image. Scale bars: 10 µm.

S.1

	1. CK12a	2. CK12b	3. CK13a	4. CK13b	5. CK10a	6. CK10b
1. CK12a		74.8	40.7	34.9	28.2	19.8
2. CK12b	87.9		37	33.9	25.6	17.2
3. CK13a	58.9	58.9		82.4	32.5	17.9
4. CK13b	56.5	56.5	88.9		31.9	17
5. CK10a	42.1	43	52.6	49.1		39.7
6. CK10b	38.7	35.8	36.4	34.3	57	

Identity
Similarity

Supplemental Table I: MatGAT output for % of identity and similarities of the six CCL19-like sequences of rainbow trout *(Oncorhynchus mykiss).* Scoring matrix Blosum50 was used in the comparison. % of similarity is shown in light grey and % of identity in dark grey.